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ORIGINAL ARTICLE

Evaluation of the Effect of 2.4 mm Superior Corneal Incision on Astigmatism after Phacoemulsification

Islam ME[1], Khan M[2], Ahmed AU[3], Rahman KA[4], Mamun A[5]

Abstract

Background: This study was conducted from January 2020 to June 2020 in Dristi Eye Hospital, Kushtia, Bangladesh and the aim was to evaluate the surgically induced astigmatism caused by 2.4-mm superior corneal incision in phacoemulsification measured by keratometry.
Methods: One hundred eyes with simple cataract, of which 63 on right eye and 37 on left eye were enrolled. Age range was from 51 to 80 years. All underwent 2.4 mm superior corneal incision. Keratometry reading was compared between pre-operative and post-operative assessment after 1 and 4 weeks of cataract surgery to assess the change in corneal astigmatism induced by the incision.
Results: The post-operative change in corneal astigmatism was found to be well below the international accepted average of 0.75D, of which 56% had surgically induced astigmatism (SIA) of 0.75D and only 5 % showed SIA of 1.00D after 4 weeks.
Conclusions: Surgically induced astigmatism is the main obstacle to achieve good uncorrected visual acuity (UCVA), even in conventional phacoemulsification. In addition to pre-existing astigmatism, various parameters like size, width, depth, configuration and location of the incision contribute to postoperative astigmatism.

Key words: Superior corneal incision, surgically induced astigmatism, Phacoemulsification, Keratometry.

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Introduction

Cataract is one of the leading surgically treatable causes of blindness in the world and implantation of an intraocular lens (IOL) is most common procedure. A corneal incision has the benefit of being bloodless and having an easy approach, but surgically induced astigmatism (SIA) is still a concern[1]. There is very little astigmatism and thus, visual improvement is faster allowing the patient to return to his work after few days[2]. Over the past years, surgical technique has evolved from standard extra-capsular to micro-incision without suture, which allowed cataract surgery to be a less invasive procedure with better and more predictable refractive results[3]. Incisions for cataract surgery will induces a flattening effect when made on (or near) the steep axis of the cornea, termed as surgically induced astigmatism (SIA),which is one of the most common complications after cataract surgery[4].

The aims of modern cataract surgery are smaller incision size, rapid visual rehabilitation and minimum SIA[4]. With the introduction of foldable intraocular lens (IOL) and advanced IOL delivery systems, the corneal incisional wound for phacoemulsification can be reduced in size to 2.4 mm or smaller. Phacoemulsification fulfills all these aims and evolved as the preferred surgical procedure for cataract extraction followed by insertion of a foldable IOL through small incision,

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best possible uncorrected visual acuity and minimal SIA[5]. Factors affecting SIA are the size[6]; site of incision[7], pre-existing astigmatism[8] and the patient's age[9]. In this study the aim was to evaluate SIA in 2.4 mm superior corneal incision after phacoemulsification.

Materials and Methods

100 patients aged from 51 to 80 years with simple cataract who underwent phaco-emulsification smoothly were included by purposive sampling technique and performed by one surgeon with 2.4 mm superior corneal self-sealing incisions between January 2020 and June 2020 at Dristi Eye Hospital Kushtia, Bangladesh. The protocol was in accordance with the basis of Helsinki.

Those with glaucoma, uveitis, diabetic mellitus or other intraocular pathology were excluded and the entity of cataract from grade 2 to 3 on the lens opacities classification system III (LOCS III) was included. There were 58 males and 42 females with 48 right and 32 left eyes. Routine ophthalmologic examinations were done before surgery and the cornea curvature was measured by automatic keratometer which was repeated in first and fourth postoperative weeks. Preoperative evaluation included uncorrected and corrected visual acuity, refraction, manual keratometry, intraocular pressure, biomicroscopy, biometry and intraocular lens calculation was done by SRK-T formula and fundoscopy. The qualitative variables like gender and astigmatism were presented as frequency and percentages and the quantitative variables like age was presented as mean ± SD.

Surgical procedure: Routine ophthalmologic peribulbar anesthesia was given and the operated eye was dressed as usual. A three-step peripheral superior corneal incision was performed to penetrate into anterior chamber by using a 2.4 mm width knife. Introduction of viscoelastic capsulorhexis was done to open the anterior capsule of lens followed by hydro-dissection and phacoemulsification was performed by the standard stop & chop technique. After complete removal of cortical material, the anterior chamber was reformed with viscoelastic material and a foldable intraocular lens was implanted. Cornea wound was confirmed to be tightly closed by the balance of internal intraocular pressure without suture and dressed with antibiotic drop and patched gently. Postoperative examination with visual acuity, keratometry, intraocular pressure and biomicroscopy was done after 1 and 4 weeks. Outcome measures were induced corneal refractive change and corrected and uncorrected visual acuity.

Results

Among 100 patients the mean age was 68.8±9.31 years with minimum and maximum of 51 and 80 years respectively and more than half (58%) were males. (*Table 1*)

Table I

Distribution of respondents by age and sex (n=100)

Age	Frequency (%)
51-60	37 (37%)
61-70	41 (41%)
71-80	22 (22%)
Total	100 (100%)

Gender	Frequency (%)
Male	58 (58%)
Female	42 (42%)
Total	100 (100%)

Surgically induced astigmatism (SIA) range was 0.0 - 1.0 D in all postoperative intervals of the study. On week-1, SIA was 0.50 - 0.75 D in 45 (45%) patients and 0.0 - 0.25 D in only 1 (1%) patients. On week-4 more than half (56%) had a SIA of 0.75D and 5 % showed SIA of 1.00D. The mean SIA values were 0.72 ± 0.255 D and 0.65 ± 0.27 D on postoperative week-1 and week-4 respectively. *(Table II)*

In this study the postoperative change in corneal astigmatism was found to be well below the international accepted average of 0.75D. Summing up over all trends of SIA under study, it exhibited stair case like trends shifting from higher degree to lower degree with the advancement of postoperative intervals.

Table II

Keratometric change (diopter in cyl) in patients on week 1 & week 4

	Keratometric change in patients' (diopter in cyl)			
	00-0.25 D n (%)	0.25-0.50 D n (%)	0.50-0.75 D n (%)	0.75-1.00 D n (%)
On week 1:				
Male	1 (1%)	8 (8%)	27 (27%)	22 (22%)
Female	0 (0%)	4 (4%)	18 (18%)	20 (20%)
Total	1 (1%)	12 (12%)	45 (45%)	42 (42%)
On week 4:				
Male	4 4%)	16 (16%)	35 (35%)	3 (3%)
Female	5 (5%)	14 (14%)	21 (21%)	2 (2%)
Total	9 (9%)	30 (30%)	56 (56%)	5 (5%)

(NB.- None of our cases had preexisting astigmatism.)

Discussion

Surgically-induced astigmatism after cataract surgery is a complex problem because the final refractive result is influenced by various factors, such as incision size, preoperative astigmatism, and the amount of manipulation during surgery[10] and determined by the difference between preoperative and postoperative keratometry[3]. Modern small-incision clear corneal cataract surgery causes less SIA and less change to corneal shape than older methods[11, 12]. It is assumed that a smaller incision depends on early stabilization of refraction, shortening of the healing period and greater anterior chamber stability at phacoemulsification surgery[13,14] Small 2.4-mm corneal incisions in phacoemulsification induced on average very small corneal refractive change and a SIA of 0.75D is expected.

Mohammed et al.[15] studied SIA through 3.2 mm temporal incision and was 0.71 D at 1 week, 0.63 D at 1 month and 0.26 D at 6 months and it was showed lowered at 6 months than the first postoperative visit. Hayashi et al.[16] stated that the induced astigmatism was 0.74 D after 2.65 mm and 0.56 D after 2.00 mm phaco-emulsification surgery at 2 months postoperatively. Wei et al.[17] found that SIA was lower in 2.5 mm group compared with 3.5 mm group at 4 weeks, but there was no statistically difference at 12 weeks from the operation. In our study 2.4 mm incision induced less astigmatism which decreased in 4th week than 1st week postoperatively.

From the results, it was clear that 95% of eyes demonstrated a SIA of less than 0.75D with 5% showed increase in astigmatism. A recent study showed similar results for microcoaxial phacoemulsification (2.4 mm incision), with approaches producing optical neutrality[18]. In contrast, a study comparing 1.8 mm and 2.2 mm microcoaxial phacoemulsification surgeries demonstrated similar SIA outcomes with both incision sizes[19].

Corneal astigmatism was slightly increased after surgery (1.00 D) in some cases and noted that individual variations in biomechanical response occurred, so that steepness could paradoxically increase along the incision meridian in particular case. In fact, only 5% or 5 eyes showed worsening the corneal astigmatism, which was limited to 1.00D. SIA findings on week-4 (0.65±0.27 D) using superior corneal incision phacoemulsification, various workers had reported both higher and lower degree of SIA in this study. Gaide and Khaire[20] had recorded SIA on 40th day with superior approach, was 0.585 ± 0.464 D which was less than our study. Higher SIA was recorded by Marek *et al* [21] (SIA 1.0 ± 0.54 D) and Simsek *et al*[22] (1.44 ± 0.31 D) after six month interval.

In our study 95 (95%) patients exhibited SIA range from 0.00 - 0.75 D and in only 5 (5%) patients was 1.00 D on week-4. These trends corroborated the findings of Gaide and Khaire[20] reporting SIA range 0.00 - 1.5 D on 40th postoperative day. One study showed that mechanical and thermal stress from the phacoemulsification tip destabilizes and denatures stromal collagen fibres around corneal incisions, with poor wound sealing as result[23]. The main concern might be a stretching of the wound and the intra ocular lens implantation due to the maneuvers taking place through such a small incision. The stretching effect can produce a distortion of the wound architecture and results an unexpected astigmatism.

Theoretically, coaxial surgery with newer US, minimizes rise of temperature near the wound,

thereby maximizes postoperative incision closure, reduces SIA and postoperative endophthalmitis. We believe that our lower SIA with the 2.4 mm incision using newer US and transcorneal IOL injection preserves integrity of corneal incision without wound stretching.

Conclusion

In modern days, cataract surgery using toric and multifocal intraocular lens demands minimization of surgically induced astigmatism as low as possible according to patient's expectation. Wound burns thought to occur tighter and smaller by modern phacoemulsification systems and induce little refractive change.

References

1. Nikose A, Saha D, Laddha P, et al. Surgically induce astigmatism after phacoemulsification by temporal clear corneal and superior clear corneal approach: a comparison. *Clinical Ophthalmology* 2018; 12: 65–70.

2. T Thevi C. Outcome of phacoemulsification and extracapsular cataract extraction: A study in a district hospital in Malaysia. *Malays Fam Physician* 2014; 9(2): 41–7.

3. Yasmeen HH, Khalil I. Comparison of astigmatism after phacoemulsification and extracapsular cataract extraction. *Adv Ophthalmol Vis Syst* 2020; 10(3): 60–63. DOI: 10.15406/aovs.2020.10.00386

4. Rainer G, Menapace R, Vaas C, *et al*. Corneal Shape Changes after Temporal and Superolateral 3.0 mm Clear Corneal Incisions. *J Cataract Refract Surg* 1999; 25: 1121-26.

5. Jackson TL. Moorfields Manual of Ophthalmology. Mosby Elsevier, 2008; Philadelphia, 6.

6. Moon SC, Mohamed T, Fine IH. Comparision of surgically induced astigmatism after clear corneal incision of different sizes. *Korean J Ophthalmology* 2007; 31: 1-5.

7. Altan-Yaycioglu R, Akova YA, Akra S, *et al.* Effect on astigmatism of the location of clear corneal incisionin phacoemulsification of cataract. *J Refract Surg* 2007; 23: 515-18.

8. Tejedor J,Murube J. Choosing the location of corneal incision based on pre-existing astigmatism in phacoemulsification. *Am J Ophthalmol* 2005; 139: 767-76.

9. Tadros A, Habib M, Tejwani D, *et al*. Opposite clear corneal incision on the steep meridian in phacoemulsification: Early effects on the cornea. *J Cataract Refract Surg* 2004; 30: 414-17.

10. Wilczynski M, Supady E, Piotr L, Synder A, Palenga-Pydyn D, Omulecki W. Comparison of surgically induced astigmatism after coaxial phacoemulsification through 1.8 mm micro-incision and bimanual phaco-emulsification through 1.7 mm microincision. J Cataract Refract Surg 2009; 35: 1563e9.

11. Kohnen T, Dick B, Jacobi KW. Comparison of the induced astigmatism after temporal clear corneal tunnel incisions of different sizes. J Cataract Refract Surg 1995; 21: 417e24.

12. Hayashi K, Hayashi H, Nakao F, Hayashi F. The correlation between incision size and corneal shape changes in sutureless cataract surgery. Ophthalmology 1995; 102: 550e6.

13. Drews RC. Five year study of astigmatic stability after cataract surgery with intraocular lens implantation: comparison of wound sizes. J Cataract Refract Surg 2000; 26(2): 250-253.

14. Kohnen T, Lambert RJ, Koch DD. Incision sizes for foldable intraocular lenses. Ophthalmology 1997; 104(8): 1277-1286.

15. Pakravan M, Nikkhah H, Yazdani S, Shahabi C, Sedigh-Rahimabadi M. Astigmatic Outcomes of Temporal versus Nasal Clear Corneal Phacoemulsification. J Ophthalmic Vis Res 2009; 4(2): 79-83.

16. Hayashi K, Yoshida M, Hayashi H. Postoperative corneal shape changes: microincision versus small-incision coaxial cataract surgery. J Cataract Refract Surg. 2009 Feb; 35(2): 233-239.

17. Wei YH, Chen WL, Su PY, Shen EP, Hu FR. The influence of corneal woundsize on surgically induced corneal astigmatism after phacoemulsification. J Formos Med Assoc 2012; 111(5): 284-289.

18. Kocabora MS et al. Surgical outcome of coaxial phacoemulsification with torsional ultrasound after a 2.4 mm versus 3.2 mm clear corneal temporal incision. Bull Soc Belge Ophtalmol 2010; (315): 25-30.

19. Lee KM, Kwon HG, Joo CK. Microcoaxial cataract surgery outcomes: comparison of 1.8 mm system and 2.2 mm system. J Cataract Refract Surg 2009 May; 35(5): 874-80.

20. Chayet A, Sandstedt C, Chang S, et al. Use of the lightadjustable lens to correct astigmatism after cataract surgery. *Br J Opthalmol* 2010; 94(6): 690-2.

A Study on Prelabour Rupture of Membrane (PROM) at Rajshahi Medical College Hospital

Akhter MM[1], Begum S[2], Nawrozy MS[3], Rahim HMA[4]

Abstract

Background: Prelabour rupture of the membrane (PROM) is a common problem faces by the obstetricians. This study was conducted to have a look into the causes and outcome of PROM cases at Rajshahi Medical College Hospital.

Methods: This study was conducted from April 2019 to June 2020 at the Department of Obstetrics & Gynaecology of Rajshahi Medical College Hospital, Rajshahi. A total of 76 PROM cases was included; out of them 36 (47%) were preterm PROM and 40 (53%) were term PROM. Their antenatal clinic (ANC) visit records regarding past & present obstetric history were recorded. Urine culture for bacteria was done in all the cases. Outcome of the current pregnancy as mode of delivery, living or dead baby, weight of the baby, APGAR score were recorded. The data was presented as actual number and percentage of total. In addition "Mean ± SD" was used to express the quantitative data.

Results: Age range of them was 18 to 36 years and gestational age was 29 to 39 weeks. Among all the cases 42(55%) attended antenatal clinic (ANC) regularly, 30(39.5%) irregularly and 4(5.5%) never attended. 5 cases were with multiple pregnancies, of them 3 in preterm group and 2 in term group. Number of malpresentation was 6. Dead baby was the outcome in 08 (11%) cases, all of them were preterm PROM. Urine culture +ve for bacteria were in 4(5.5%) cases; all of them gave birth to dead babies. Underweight babies were 15 in preterm and 2 in term group; all multiple pregnancies (n=5) were underweight. Delivery by caesarean section was done in 40 cases, normal or assisted vaginal delivery (NVD) was done with live baby in 23 cases and NVD was done with dead baby in 8 cases.

Conclusion: Dead baby was the outcome in preterm PROM only where positive urine culture for bacteria came out as a very grave sign.

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Introduction

Prelabour rupture of the membrane (PROM) is a common problem faces by the obstetricians in their daily practices. PROM refers to spontaneous rupture of the amniotic membranes at any time beyond 28 weeks of gestation but before the onset of labour; when this occurs beyond 37 weeks of gestation it is called term PROM and when it occurs before 37 weeks of gestation it is called preterm PROM (PPROM)[1]. PROM occurs in 10% of all pregnancies[1] and PPROM occurs in about 2% of all pregnancies[2,3]. The most frequent consequence of PPROM is preterm delivery, with some 50% of cases delivering within a week, 75% within 2 weeks and 85% within a month[2]. PPROM accounts for about 30% of all preterm deliveries[3]. PPROM occurs more frequently in multifoetal gestations: 25% in twin pregnancies, 50% in triplet pregnancies & 75% in quadruplet pregnancies[4]. Complications related to PROM are ascending infection leading to (a) when the delivery is delayed for >24 hours of rupture of membrane, may lead to chorioamnionitis, neonatal sepsis, endometritis,

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metarnal sepsis or even death (b) cord prolapse especially in malpresentations, (c) dry labour, (d) placental abruption (e) foetal pulmonary hypoplasia ect.[1] Taking all the above into consideration, this study was conducted to have a look into the causes and outcome of PROM cases at Rajshahi Medical College Hospital.

Materials & Methods

This cross sectional hospital based study was conducted from April 2019 to June 2020 at the Department of Obstetrics & Gynaecology of Rajshahi Medical College Hospital, Rajshahi. Any patient with any gestational age with the presentation of PROM was included in this study. Total 76 Premature Rupture of Membrane (PROM) cases were included by purposive sampling technique. They were categorized into two types, preterm PROM (gestational age <37 weeks) and term PROM (gestational age ≥37 weeks).

With due consent, data was collected with the help of a predesigned data-sheet. Their antenatal clinic (ANC) visit records as past obstetric history regarding D&C, preterm birth/or PROM and present obstetric history including gravida number, presence of multiple pregnancies, malpresentations etc. was recorded. Urine culture for bacteria and Hb% were done in all the cases. Outcome this pregnancy as mode of delivery, living or dead baby, weight of the baby, APGAR score were recorded.

The data was presented as actual number and percentage of total. In addition “Mean ± SD” was used to express the quantitative data.

Results

Total 76 PROM cases were included in this study. Age range of them was 18 to 36 years with mean ± SD was 26.12 ± 4.366 years. Gestational age was 29 to 39 weeks. Out of them 36(47%) were preterm PROM and 40(53%) were term PROM. Gestational ages of the cases are shown in Figure-1:

Out of them 42(55%) attended antenatal clinic (ANC) regularly, 30(39.5%) irregularly and 4(5.5%) never attended. Mean±SD of gravida number was 2.25±0.95; primi gravida was 20(26%), 2nd gravida was 24(32%), 3rd gravid was 25(33%) and 4th gravida was 07(9%) in number. 5 cases were with multiple pregnancies, of them 3 in Preterm group and 2 in Term group. Number of malpresentation was 6. Hb% (mean±SD) was 10.614±0.374 gm/dl. History of D&C was present in 14 cases in their previous pregnancies and history of Preterm birth/or PROM was present 4 cases.

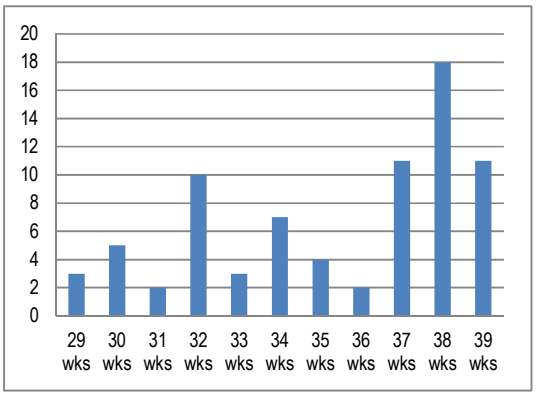


Fig.-1: Gestational age and frequency of the PROM cases.

Dead baby was the outcome in 08 (11%) cases; all of them were preterm PROM. Their gestational ages were 29 weeks (n=2), 30 weeks (n=3), 31 weeks (n=2) & 32 weeks (n=1). Out of 76 cases, 4(5.5%) cases were with urine culture +ve for bacteria; all of them gave birth to dead baby. Underweight babies were 15 in number in preterm cases, 2 in number in term cases and in all multiple pregnancies (n=5); of these multiple pregnancies 3 were in preterm group and 2 in preterm group (Table-I).

Table-I: Body weight of the live babies.

Preterm PROM	
Category	**Frequency & (% out of 22 cases)**
<2.5 Kg	15 (68%)
≥2.5 Kg	7 (32%)
<2.5 Kg (Multiple Pregnancy)	3 (16%)
Dead babies	8 (36%)
Referred before delivery	3 (13%)
Term PROM	
<2.5 Kg	2 (5%)
≥2.5 Kg	36 (98%)
<2.5 Kg (Multiple Pregnancy)	2 (9%)
Dead babies	--
Referred before delivery	--

N.B.- Multiple pregnancies, dead babies and referred cases were excluded from percentage calculation.

APGAR score of Preterm was mean± SD=7.08± 0.909 and of Term was 8 for all (Table-II).

Table-II: APGA Score of the live babies.

Preterm PROM	
Category	**Frequency & (% out of 22 cases)**
APGAR=6	9 (36%)
APGAR=7	5 (20%)
APGAR=8	11 (44%)
Term PROM	
APGAR=8	40(100%)

N.B.- In multiple pregnancies APGAR score were same for all the two or three babies and we considered each pregnancy as a single number(n). Dead babies (n=8) and referred cases (n=3) were out of calculation.

Delivery by Caesarean section was done in 40 cases including both preterm and post term groups. Normal or assisted vaginal delivery (NVD) was done with live baby in 23 cases including both preterm and post term groups. NVD was done with dead baby in 8 cases. 3 cases were referred to higher centre before delivery.

Discussion

As we found, out of our 76 cases, 47% were preterm PROM and 53% were term PROM. Another study found, more or less, a similar result (42.4% preterm PROM and 57.6% term PROM) – indicating that PROM may occur in both preterm and at term, with a bit higher tendency at term[5]. Gravida number of our cases ranged from one to four and in that other study, it ranged from one to seven[5], indication that gravida number is not a factor in developing PROM.

We got APGAR 6 in 36%, 7 in 20% & 8 in 44% preterm PROM and 8 in all term PROM. Nazneen et al found APGAR ≤7 in about 22% [5]. Underweight babies were 15 in preterm cases and 2 in number in term cases because the preterms did not get adequate time to grow and so the outcome was low APGAR.

Dead baby was the outcome in 8(11%) of our cases; all of them were preterm PROM and out of them, 4(5.5%) cases were with urine culture +ve for bacteria. Intrauterine infection has been observed as a noteworthy etiological factor in the pathogenesis and subsequent maternal and neonatal morbidity associated with preterm PROM [6].

Regarding past obstetric history, we found history of D&C was present in 14(18%) cases in their previous pregnancies and history of Preterm birth/or PROM was present 4(5.3%) cases. Another study demonstrated the occurrence of preterm PROM was higher in women who underwent preterm labor [7].

Conclusion

Dead baby was the outcome in preterm PROM only. And, positive urine culture for bacteria came out as a very bad sign.

References

1. Konar H. Prelabor Rupture of the Membranes. In: DC Dutta's Text Book of Obstetrics, 9th edition 2018, Chapter 22, Page 297. © Mrs Madhusri Konar. Japee Brothers Medical Publishers (P) Ltd.

2. Bennett P. Preterm Labour; In: Dewhurst's Textbook of Obstetrics and Gynaecology, 9th edition, Chapter 28, Page 401; edited by Edmonds DK, Lees C & Broune T. © 2018 John Wiley & Sons Ltd. Black Well Publishing Ltd.

3. Alabi-Isama L & Ugwumadu A. Preterm Birth. In: Arias' Practical Guide to High-Risk Pregnancy and Delivery – A South Asian Perspective, 4th edition, Chapter 8, Page 137; edited by Bhide A, Arulkumaran S, Damania K, Daftary SN. © 2015 Reed Elsevier India Pvt. Ltd.

4. Dziadosz M, Roman AS. Multifetal gestation. In: Current Diagnosis & Treatment Obstetrics & Gynaecology, 12th edition, Chapter 17, Page 307; edited by DeCherney AH, Nathan L, Laufer N, Romen AS. © 2019 McGraw-Hill education.

5. Nazneen S, Begum F, Nargis S. Premature Rupture of Membrane - A Clinical Study In Comilla Medical College Hospital. Bangladesh J Obstet Gynaecol, 2013; Vol. 28(2): 82-87.

6. Hyagriv N. Simhan, Timothy P. Canavan. Preterm premature rupture of membranes: diagnosis, evaluation and management strategies. BJOG: an International Journal of Obstetrics and Gynaecology, March 2005, Vol. 112, Supplement 1, pp. 32–37.

7. Hackenhaar AA, Albernaz EP, da Fonseca TMV. Preterm premature rupture of the fetal membranes: association with socio-demographic factors and maternal genitourinary infections. © 2013 Sociedade Brasileira de Pediatria. Published by Elsevier Editora Ltd.
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ORIGINAL ARTICLE

Clinical Presentation and Histological Finding of Parapharyngeal Tumor at Tertiary care Hospital

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Abstract

Background: Parapharyngeal tumors are challenge to the surgeons as they are large and intimately related to carotids and lower cranial nerves at the time of presentation. Aim of this study was to find out the clinical presentations and histological findings of parapharyngeal tumors in tertiary level hospital.

Methods: This study was done from January 2018 to December 2019 at the Department of ENT of Shaheed Tajuddin Ahmed Medical College Hospital and Kushtia Medical College Hospital. 53 patients who underwent surgery for primary parapharyngeal tumors were included. Preoperative symptoms, histological type, surgical approach and complications were evaluated. Enhanced CT and MRI scans were used to confirm the location and size of the tumor as a preoperative diagnosis.

Results: The most common symptoms of neurogenic tumors were a neck mass (26.42%), Feeling foreign body in the throat 7(13.21), hoarseness (9.43%) and pharyngeal pain (5.66%) and abnormal sensation of the pharynx (7.55%). Majority 32(59.52%) was found schwannoma, followed by 15(28.57%) were pleomorphic adenoma, 03(4.76%) were paraganglioma. First bite syndrome, Lower lip palsy, Horner syndrome and Tongue palsy were common post-operative complications.

Conclusion: Majority of the tumors can be accessed by poststyloid and prestyloid approach cases. Accurate imaging and meticulous surgery results in good outcome in benign tumors. Majority pathological diagnosis was found schwannoma, first bite syndrome, lower lip palsy, horner syndrome and tongue palsy were common postoperative complications.

Key Words Parapharyngeal tumors; Surgical approach; Cranial nerve palsy.

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Introduction

Parapharyngeal tumors are uncommon and a challenge to the surgeon as they are large and intimately related to carotids and lower cranial nerves at the time of presentation.[1] Parapharyngeal region is a triangular fat-filled compartment of the suprahyoid neck, lateral to the pharynx. It is described as an inverted pyramid with the floor of the pyramid at the skull base and the apex at the level of the greater cornu of the hyoid bone.[2] Parapharyngeal tumors are rare pathologies that comprise approximately 0.5% of all head and neck tumors.[3] 80% of them are benign and 20% are malignant. The most common lesions arise from the salivary glands, followed by neurogenic tumors.[4]

Patients often present with locally advanced tumors which are intimately associated with important neurovascular structures like carotids, vagus & hypoglossal nerves. These tumors can extend higher into masticator space and can be intimately associated with facial nerve and skull base. They can compress the airway and

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present with stridor. Some of them can secrete vasoactive amines and can be part of a syndrome involving multiple sites. Some of these tumors may be associated with cranial nerve palsies at the time of presentation.[5] Surgery of these locally advanced tumors is challenging and requires expertise and experienced surgeon and anesthesiologist.[6] Though the outcome of treatment of benign parapharyngeal tumors is good with regard to survival, serious complications and morbidity can result due to treatment. Aim of this study was to find out the clinical presentations and histological findings of parapharyngeal tumors in tertiary level hospital.

Materials and Methods

The present, cross sectional study included 53 patients who underwent surgery for primary parapharyngeal tumors between January 2018 and December 2019 in Department of ENT Shaheed Tajuddin Ahmed Medical College Hospital and Kushtia Medical College Hospital. Informed consent was obtained from the patients prior to their inclusion in the study. The following data were evaluated: Preoperative symptoms, histological type, surgical approach and complications. Patients were evaluated by thorough laboratory investigation. Enhanced CT and MRI scans were used to confirm the location and size of the tumor as a preoperative diagnosis. In particular, the following aspects were evaluated: Tumor shape and the tumor margin, the association of the tumor location with major vasculature, surrounding tissue and the deep lobe of the parotid gland (DLPG) and whether the tumor localization was pre or post-styloid. Preoperative imaging was also used to estimate the origin of the tumor, the extent of malignancy and tumor vascularity. For the examination of the histology of the tumor, fine needle aspiration cytology (FNAC) was performed in the majority of cases. Fine needle aspiration biopsy (FNAB) or incisional biopsy was required in certain cases when the histological results were unclear and there was a suspicion of malignancy. In the case of malignancy, additional imaging examination was performed to inform the selection of a treatment plan. Where tumors exhibited the possibility of paraganglioma, angiography or CT-angiography was performed to evaluate the vasculature associated with the carotid artery. All patients enrolled in the study underwent surgical treatment. The plan for the surgical approach was selected according to the tumor location, histological findings, the relationship to anatomical structures and the suspicion of malignancy. The approach of wide resection and reconstruction was selected in cases where malignancy was confirmed.

Data were expressed as actual number and percentage of total.

Results

Age range was 23 to 67 years with the common age group being 41-60 (58.49%). The mean age was 48.67(±15.72) years. (Table-I). Female was more (n=30, 56.6%) than male (n=23, 43.4%).

Table I

Age distribution of the study population (n=53)

Age in years	Number	Percentage
20-30 yrs	6	11.32
31-40 yrs	11	20.75
41-50yrs	19	35.85
51-60 yrs	12	22.64
>60 yrs	5	9.43

Mean ±SD age is 48.67(±15.72) years; Range 23-67 years.

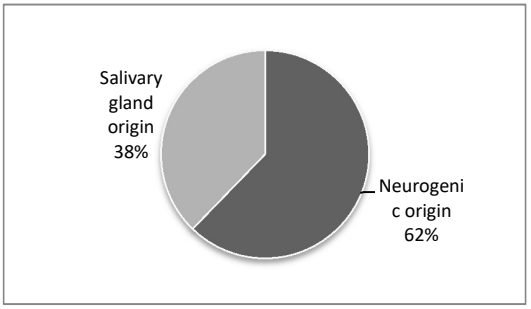


Fig.-I: Distribution of tumor according to origin (n=53)

Regarding sign and symptoms, the most common symptoms of neurogenic tumors were neck mass 14(26.42%), Feeling foreign body in the throat 7(13.21), hoarseness 5(9.43%), abnormal sensation of the pharynx (7.55%) and pharyngeal pain (5.66%). (Table-II)

Table-II

Incidence of preoperative symptoms in parapharyngeal tumors (N=53)

Symptoms	Number	Percentage
Neck mass	14	26.42
Feeling foreign body in the throat	7	13.21
Hoarseness	5	9.43
Abnormal sensation of the pharynx	4	7.55
Pharyngeal pain	3	5.66
Pharyngeal mass	3	5.66
Tongue palsy	1	1.89
No symptoms	16	30.19

Preoperative CT or MRI imaging was used to evaluate the location of each tumor. A total of 34 (64.29%) tumors were located in the Poststyloid. Prestyloid space cases were 14(26.19%) and 5(9.52%) were prestyloid-poststyloid. The size of each tumor was measured with CT or MRI imaging; the most frequent range for tumor size was 3.0-4.0 cm (24 cases; 45.24%). (Table-III)

Table III

Tumor location and size measured by CT and MRI of the study patients (n=53)

	Number	Percentage
Tumor location		
Poststyloid	34	64.29
Prestyloid	14	26.19
Prestyloid-poststyloid	5	9.52
Size of the tumor		
2.0-3.0 cm	9	16.67
3.0-4.0 cm	24	45.24
4.0-5.0 cm	20	38.10

Regarding pathological diagnosis, it was observed that majority 32(59.52%) was found schwannoma, followed by 15(28.57%) were pleomorphic adenoma, 03(4.76%) were Paraganglioma. (Table-IV)

Table-IV

Histopathological diagnosis

Pathological diagnosis	Number	Percentage
Schwannoma	32	59.52
Pleomorphic adenoma	15	28.57
Paraganglioma	3	4.76
Neurofibroma	1	2.38
Carcinoma in pleomorphic adenoma	3	4.76

First bite syndrome, Lower lip palsy, Horner syndrome and Tongue palsy were common post-operative complications. (Table-V)

Table-V

Post-operative complication of the study patient (n=53)

Complications	Number	Percentage
First bite syndrome	9	16.98
Lower lip palsy	6	11.32
Total facial nerve palsy	3	5.66
Pharyngeal pain	2	3.77
Horner syndrome	11	20.75
Tongue palsy	10	18.87
Vocal cord palsy	9	16.98
Pharyngoparalysis	3	5.66

Discussion

In this study, it was observed that the common age group was found 41-60 which (58.49%) minimum age was 23 and maximum age was 67 years. The mean age was 48.67(±15.72) years. Majority of the patients in our series were in the 3rd decade of life and a few about 50-years-of-age. Other studies in literature also have reported maximum incidence of parapharyngeal tumors in the age group of 40 years to 47 years.[7] The mean age of patients treated for PPS tumors ranges from 53 to 42 years; however, some authors include patients under 18 years of age in the analysis. Their population mean age was 52 years.[8,9]

Current study showed that female was predominating (56.6%) than male (43.4%). Rzepakowska et al.[3] reported there were 46 (67.6%) women and 22 (32.4%) men with a mean age of 52.2 years (age range 33–92 years).

Regarding sign and symptoms, the most common symptoms of neurogenic tumors were a neck mass (26.42%), Feeling foreign body in the throat 7(13.21), hoarseness (9.43%) and pharyngeal pain (5.66%) and abnormal sensation of the pharynx (7.55%). Ijichi & Murakami[10] reported that the most common symptoms of neurogenic tumors were a neck mass (37.5%), hoarseness (12.5%) and pharyngeal pain (12.5%). The most common symptoms of salivary gland tumors were the presence of a mass on the neck (30.8%) and abnormal sensation of the pharynx (15.4%).The most frequent symptom in the cohort of the present study was a neck mass, followed by pharyngeal mass; this is comparable with other studies.[11] Dysphasia and pain have also been reported to be common symptoms.[11,12] Rzepakowska et al.[13] studied in 2018, reported a feeling of an obstacle in the pharynx, hoarseness, speech disorders, tongue numbness and nasal congestion. Rzepakowska et al.[3] studied that symptoms on admission were present in 43 (63.2%) patients. Most of them had foreign body sensations in the throat (35/68), difficulty swallowing (33/68), a neck mass (29/68) or symptoms of Eustachian tube dysfunction (15/68). Thirty-two percent of patients (22/68) were asymptomatic and were diagnosed accidentally.

In this study preoperative CT or MRI imaging was used to evaluate the location of each tumor. We found 34(64.29%) tumors were located in the poststyloid, 14(26.19%) in prestyloid space and 5(9.52%) in the prestyloid and poststyloid. The size of each tumor was measured with CT or MRI imaging. The most frequent range for tumor size was 3.0-4.0 cm (24 cases; 45.24%) followed by 4.0-5.0 cm (20 cases; 38.10%). Gupta et al[1] reported that the average size of parapharyngeal space tumor was 6±3 cm. This was similar to most studies which reported average diameter of 5 cm.[14] Few of our patients presented with tumors of massive size (10 cm × 12 cm). In Rzepakowska et al.[3] study, the majority of tumors (39, 57.4%) were located in the prestyloid space. There were 11 (16.2%) postyloid tumors and the same number of tumors involving both localizations. They identified that neurogenic tumors were more likely to be located in the poststyloid area than other types of tumors. The concealed location of PPS tumors and their slow growth contribute to the rather large volume at diagnosis. In Rzepakowska et al.[13] study, only 25% of the tumors were smaller than 4 cm, and tumors larger than 5 cm accounted for 33.8%. Most authors present only the measures for the largest tumors in their series but do not analyze the cumulative influence of tumor size on the outcomes; for example, Sun et al. found that the longest mean diameter of PPS tumors was 5.6 cm, Chang et al. reported a largest tumor size of 6.8 cm among their 51 cases, and Presutti et al. described an 8 cm diameter as the largest.[15,16]

In present study regarding pathological diagnosis, it was observed that majority 32(59.52%) was found schwannoma, followed by 15(28.57%) were pleomorphic adenoma and 03(4.76%) were paraganglioma. In the Ijichi and Murakami study, >50% of the cases were schwannoma. The most frequent origin nerves of the schwannomas were the sympathetic and vagus nerves.[10] Liu *et al* corroborated this observation, reporting that the sympathetic and vagus nerves were the most common nerves of origin in head and neck schwannomas.[17] A study by Tryggvason *et al* [18] revealed that schwannomas arise in nerves with a sensory component and are associated with sensory ganglia. In addition, it was reported that the majority of sympathetic chain schwannomas are associated with the superior cervical ganglion.[18]

This study showed that first bite syndrome, Lower lip palsy, Horner syndrome and Tongue palsy were common post-operative complications. In the Ijichi & Murakami study, FNMB palsy typically occurred following surgery to remove tumors of salivary origin, as the surgery was performed close to the mandible. The second most common complication in these previous studies was the presentation of FBS. FBS also occurred in the present study, following prestyloid tumor surgery.[10]

Conclusion

Parapharyngeal tumors present with large tumors with close proximity to important neurovascular structures and some of them are malignant. Surgery is challenging and the main modality of treatment. Majority of the tumors can be accessed by poststyloid and prestyloid approach cases. Accurate imaging and meticulous surgery results in good outcome in benign tumors. Majority pathological diagnosis was found schwannoma, first bite syndrome, lower lip palsy, horner syndrome and tongue palsy were common post-operative complications

Reference

1. Gupta A, Azeem Mohiyuddin SM, Sagayaraj A and Prasad CSBR. Outcome of Treatment in Locally Advanced Parapharyngeal Tumors. Remedy Publications LLC 2020; 5(2801): 1-5.
2. van Hees T, van Weert S, Witte B, René Leemans C. Tumors of the parapharyngeal space: the VU University Medical Center experience over a 20-year period. European Archives of Oto-Rhino-Laryngology (2018) 275: 967–972.
3. Rzepakowska A, Osuch-Wojcikiewicz E, Żurek M, Durmaj A, Niemczyk K. Tumor, host and surgery related factors predisposing to cranial nerve deficits after surgical treatment of parapharyngeal space tumors. European Archives of Oto-Rhino-Laryngology, 2020: 1-9.
4. Basaran B, Polat B, Unsaler S, Ulusan M, Aslan I, Hafiz G. Parapharyngeal space tumours: the efficiency of a transcervical approach without mandibulotomy through review of 44 cases. Acta Otorhinolaryngol Ital.2014; 34(5): 310–316
5. Cohen SM, Burkey BB, Netterville JL. Surgical management of parapharyngeal space masses. Head Neck. 2005; 27(8): 669-75.
6. Sun F, Yan Y, Wei D, Li W, Cao S, Liu D, et al. Surgical management of primary parapharyngeal space tumors in 103 patients at a single institution. Acta Otolaryngol. 2018; 138(1): 85-9.
7. Kuet ML, Kasbekar AV, Masterson L, Jani P. Management of tumors arising from the parapharyngeal space: A systematic review of 1,293 cases reported over 25 years. Laryngoscope. 2015; 125(6): 1372-81.
8. Chen H, Sun G, Tang E, Hu Q. Surgical treatment of primary parapharyngeal space tumors: a single-institution review of 28 cases. J Oral Maxillofac Surg. 2019; 77(7):1520.e1–1520.e16
9. Sun F, Yan Y, Wei D, Li W, Cao S, Liu D, Li G, Pan X, Lei D. Surgical management of primary parapharyngeal space tumors in 103 patients at a single institution. Acta Otolaryngol 2018; 138(1):85–89.
10. Ijichi K and Murakami S. Surgical treatment of parapharyngeal space tumors: A report of 29 cases. Oncology Letters 2017; 14: 3249-3254.
11. Papadogeorgakis N, Petsinis V, Goutzanis L, Kostakis G and Alexandridis C: Parapharyngeal space tumors: Surgical approaches in a series of 13 cases. Int J Oral Maxillofac Surg 2010; 39: 243-250.
12. Dimitrijevic MV, Jesic SD, Mikic AA, Arsovic NA and Tomanovic NR: Parapharyngeal space tumors: 61 case reviews. Int J Oral Maxillofac Surg 2010; 39: 983-989.
13. Rzepakowska A, Osuch-Wójcikiewicz E, Durmaj A, Krupa Z, Niemczyk K. Surgical treatment results of parapharyngeal space tumors: a report of 22 cases. Otolaryngol Pol 2018; 72 (4): 9-16.
14. Cohen SM, Burkey BB, Netterville JL. Surgical management of parapharyngeal space masses. Head Neck. 2005; 27(8): 669-75.
15. Chang SS, Goldenberg D, Koch WM. Transcervical approach to benign parapharyngeal space tumors. Ann Otol Rhinol Laryngol 2012; 121:620–624.
16. Presutti L, Molteni G, Malvè L, Marchioni D, Ghidini A, Tassi S, Chiarini L, Alicandri-Ciufelli M. Parapharyngeal space tumors without mandibulotomy: our experience. Eur Arch Otorhinolaryngol 2012; 269:265–273.
17. Liu HL, Yu SY, Li GK and Wei WI: Extracranial head and neck Schwannomas: A study of the nerve of origin. Eur Arch Otorhinolaryngol 2011; 268: 1343-1347.
18. Tryggvason G, Barnett A, Kim J, Soken H, Maley J and Hansen MR: Radiographic association of schwannomas with sensory ganglia. Otol Neurotol 2012; 33: 1276-1282.

ORIGINAL ARTICLE

Socio-Demographic Association over COVID-19 Positive Cases in Bangladesh

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Abstract

Background: COVID-19 has emerged as a pandemic crisis world-wide for about a year. The aim of this study was to have a look into the socio-demographic aspects and clinical presentations of the COVID-19 cases.
Methods: This study was performed from March 2020 to November 2020 in the monitoring center of COVID-19 contact tracing unit of Civil Surgeon Office, Dhaka with 95 COVID-19 positive patients of mild to moderate symptoms (n=95). Socio-demographic and clinical data were evaluated and collected using a pretested case record form. Continuous scale data were presented as "mean ± standard deviation" and Categorical data were presented as "number and percentage".
Results: Out of 95 patients, 63 patients were 21-30 years of age with mean±SD age was 27.32±5.51 years. Male patients were predominant (63.2%). 40.0% patients were office employee, 15.8% student, 14.7% homemaker, 13.7% worker and 12.6% trader. All patients were from urban area. 14.7% patients were asymptomatic, 77.9% had mild symptoms, 5.3% moderate and 2 (2.1%) had severe symptoms. 12.6% patients had asthma, 5.3% hypertension, 2.1% diabetes, 1.1% psoriasis and 1.1% had arthritis. Symptoms of COVID-19 were fever 71.6%, cough 47.6%, sore throat 37.9%, headaches 20.0%, fatigue or tiredness 17.9%, muscle or body aches 14.7%, runny or stuffy nose 12.6% and shortness of breathing 11.6%, altered taste 8.4%, chest congestion 8.4%, skin rash 8.4%, chills 7.4%, loss of appetite 6.2, diarrhea 4.2 and abdominal discomfort 2.1%.
Conclusion: It was observed that any age or sex may be affected and urban peoples are mostly vulnerable. Fever, cough, sore throat, headaches, fatigue or tiredness, muscle or body aches, runny or stuffy nose, shortness of breath, changed or lost sense of taste, chest congestion, skin rash, chills, loss of appetite, diarrhea, abdominal discomfort are the presenting features. And respiratory distress (30 breaths/min) and/or finger oxygen saturation=/or <93% at rest are features of severity. This was one the base line information-based study which would give an idea about the and socio-demographic aspects and clinical presentations of the COVID-19 cases of Bangladesh.

Key Words: COVID-19 cases, Profession of patients, Presenting features.

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Introduction

The COVID-19 pandemic is a crisis of a completely different magnitude and is a life threatening challenge of whole world including Bangladesh. Novel coronavirus disease 2019 (COVID-19) caused by Severe Acute Respiratory Syndrome Corona virus-2 (SARS-CoV-2) began in Wuhan, China, in December 2019 and has since spread worldwide.[1] The corona virus pandemic has infected and there have been 58900547 confirmed cases of COVID-19, including 1393305 deaths, reported to WHO. The outbreak spread from the Chinese city of Wuhan to more than 180 countries and

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territories – affecting every continent except Antarctica.[2] Corona viruses are enveloped positive-sense single-stranded RNA viruses belonging to the family Corona viridae. They are broadly distributed in humans and other vertebrates, eventually causing damage in digestive, respiratory and even multiple systems.[3] Around 80% of COVID-19 infections present as a mild respiratory illness in a patient who is ambulatory and can generally be managed outside the hospital. Around 15% typically need hospital care (usually for moderate to severe pneumonia) and another 5% have critical illness requiring more intensive supports.[4] Studies have shown that COVID-19 could induce fever, dry cough, dyspnea and fatigue in infected patients. In more severe cases, infections caused viral pneumonia and could lead to Severe Acute Respiratory Distress Syndrome (ARDS) and even death.[5] Pharyngodema, nasal congestion and rhinorrhoea have been reported in patients with COVID-19.[6] As of 1 June, 2020, the world has already witnessed 376320 deaths among 6194533 cases and Bangladesh has reported 49534 confirmed cases among which 10597 has recovered and 672 died.[7] Cases are increasing exponentially in Bangladesh over last one month. Severe acute respiratory illness with fever and respiratory symptoms, such as cough and shortness of breath, comprise the main clinical presentations.[8] To date, the focus has been on the clinical outcomes of COVID-19 in different ethnic groups.

However, emerging evidence seems to suggest that demographic factors including ethnicity may impact upon risk of acquiring infection with SARS-CoV-2 [defined by a positive polymerase chain reaction (PCR) assay for SARS-CoV-2 on nasopharyngeal sampling]. A recent UK study has demonstrated the disease is more common in male gender, black ethnicity, urban living and deprivation to be associated with PCR positivity in a primary care setting. However, those from ethnic minority backgrounds comprised less than 10% of the total cohort.[9] South Asian ethnicity also demonstrated that socioeconomic deprivation and lower educational level may also increase risk.[10] The previous work in China from specialized clinics found conflicting results for age and sex predicting PCR positivity[11]. A recent meta-analysis suggested 56% of PCR positive patients were male.[12] These emerging data underpin an urgent need to confirm an association between ethnicity and the probability of SARS-CoV-2 PCR in individuals presenting to hospital for clinical assessment for suspected COVID-19 and to discuss the underlying mechanisms driving such an association. Additionally, little is known about whether the social distancing and lockdown measures, implemented by most governments across the world in response to increases in COVID-19 case numbers, vary in efficacy in different ethnic and socioeconomic groups. Aim of this study was to have a look into the socio-demographic aspects and clinical presentations of the COVID-19 cases.

Materials and Methods

This was a cross sectional observational study done from March, 2020 to November, 2020 in the monitoring center of COVID-19 contact tracing unit of Civil Surgeon Office, Dhaka, with COVID-19 positive patients (n=95) of mild to moderate symptoms. Subjects came to us were categorized into (a) Urban non-residential – those are not actually the habitant of the city, came here for some professional purposes e,g, truck driving a truck or to sale vegetable etc. and were residing temporarily in commercial places, (b) Urban residential – those came to us from resident areas of city (c) Urban slums.
Data were collected by structured questionnaire only from non-critical COVID-19 patients as critical patients required immediate intensive care admission making them unable to respond to the questions. Verbal consent was taken from all participants. The severity of the COVID-19 cases was assessed based on the WHO interim guidance. Socio-demographic and clinical data were evaluated and collected by experienced clinicians using a pretested case record form. Continuous scale data were presented as “mean ± standard deviation” and Categorical data were presented as “number and percentage”.

Results

Out of 95 patients, majority 63 (66.3%) patients belonged to age 21-30 years with mean age was 27.32±5.51 years. Male patients were predominant 60 (63.2%) with male-female ratio was 1.17:1. Mean BMI was found 24.85±3.36 kg/m^2. Majority 32 (33.7%) patients completed College/Diploma education level followed by 31 (32.6%) completed University/Degree education level. 38 (40.0%) patients were office employee; followed by student 15 (15.8%), homemaker 14 (14.7%), worker 13 (13.7%), trader 12 (12.6%). 57 (60.0%) were married. More than half 51

(53.7%) of the patients came from urban non-residential area, followed by 34 (35.8%) came from urban residential area and 10 (10.5%) came from urban-slam area. Majority 85 (89.5%) patients were Muslim religion (Table-I).

Table-I: Socio-demographic characteristic of the patients (n=95)

Variables	Frequency (%)
Age (years)	
≤20	10 (10.5)
21-30	63 (66.3)
31-40	20 (21.1)
>40	2 (2.1)
Sex	
Male	60(63.2)
Female	35(36.8)
Educational status	
No education	2(2.1)
Primary School	11(11.6)
Secondary School	19(20.0)
College/ Diploma	32(33.7)
University/ Degree	31(32.6)
Marital status	
Married	60(63.2)
Unmarried	35(36.8)
Occupational status	
Office employee	38(40.0)
Student	15(15.8)
Homemaker	14(14.7)
Worker	13(13.7)
Trader	12(12.6)
Unemployed	3(3.2)
Residence area	
Urban- nonresidential	51(53.7)
Urban- residential	34(35.8)
Urban- slum	10(10.5)
Religion	
Muslim	85(89.5)
Hindu	8(8.4)
Buddhist	2(2.1)

Table-II: Patients having some other disease. (n=18, 18.9%)

Having other Diseases	Frequency (%)
Asthma	12 (12.6)
Hypertension	5 (5.3)
Diabetes	2 (2.1)
Psoriasis	1 (1.1)
Arthritis	1 (1.1)

Patients having other disease were 18 (18.9%) in number. Among them 12 (12.6%) patients had asthma and 5 (5.3%) hypertension (Table-II).

More than three fourth 74 (77.9%) patients had mild symptoms followed by 14 (14.7%) asymptomatic, 5 (5.3%) moderate and 2 (2.1%) had severe (Figure-1).

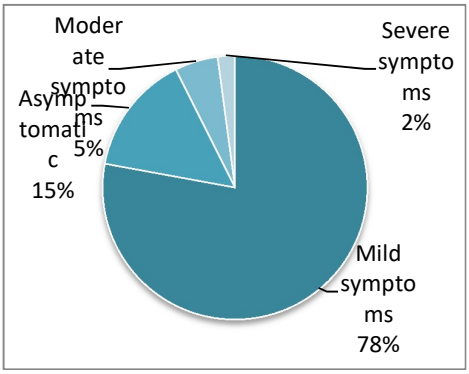


Fig.-1: Shows diseases severity of the affected cases (n=95%).

Most of the common symptoms of COVID-19 was fever 68 (71.6%), followed by cough 45 (47.6%), sore throat 36 (37.9%), headaches 19 (20.0%), fatigue or tiredness 17 (17.9%), muscle or body aches 14 (14.7%), runny or stuffy nose 12 (12.6%) and shortness of breathing 11 (11.6%) (Table-III).

Table III: Symptoms of COVID-19 (n=95)

Type of symptoms	Frequency (%)*
Fever	68 (71.6)
Cough	45 (47.4)
Sore throat	36 (37.9)
Headaches	19 (20.0)
Fatigue or tiredness	17 (17.9)
Muscle or body aches	14 (14.7)
Runny or stuffy nose	12 (12.6)
Shortness of breath	11 (11.6)
Altered taste sense or loss of taste sense	8 (8.4)
Chest congestion	8 (8.4)
Skin rash	8 (8.4)
Chills	7 (7.4)
Loss of appetite	6 (6.3)
Diarrhea	4 (4.2)
Abdominal discomfort	2 (2.1)

*Multiple diseases occurred in any patients

Mild cases presented with fever, cough, sore throat, malaise and nasal congestion; moderate cases with pneumonia and severe cases with respiratory distress (30 breath/min) and low finger oxygen saturation (<93.0%) at rest (Table-IV).

Table IV: Clinical Category and Presenting features of COVID-19 (n=95)

Clinical features	Frequency (%)
Presenting features of Mild cases	
Fever	66 (69.5)
Cough	44 (46.3)
Sore throat	35 (36.8)
Malaise	4 (4.2)
Nasal congestion	4 (4.2)

Clinical features	Frequency (%)
Presenting feature of Moderate cases	
Pneumonia	5 (5.26)
Presenting features of Severe cases	
Respiratory distress (rate>30/min)	2 (2.1)
Finger oxygen saturation = or< 93% at rest	2 (2.1)

7 (7.4%) patients had to stay at hospital for few days. Four (4.2%) patients had hospital stay 7 days and 3 (3.2%) had hospital stay 10 days.

Discussion

It was observed that majority 63 (66.3%) patients belonged to age 21-30 years with mean age was 27.32±5.51 years. Median age of Bangladeshi people is 27.90 years[13], with low number of elderly people. This could be one reason that young age group being dominant in the society are the most infected among all (55% belong to 21 to 40 years age group.[14] Moreover we had omitted the very ill patients under ICU support; most of them were in elderly group because the patients presented with severe symptoms. Mowla et al.[15] reported Among the total participants (n=100), majority 31 (31.0%) patients belonged to age group 31-40 years with mean age was 41.7±16.3 years. Matched that of Asia, e.g. China[8] (median age: 47 years; 41.9% female), India[16] (mean age 40.3 years, 66.7% male) and other reports from Bangladesh[17] (43% were in the age range of 21 to 40 years, female: male ratio 1:2.33). But studies from America[18] (median age, 63 years) and Europe[19] (Median age, 67.5 years) showed higher age of patients but same male preponderance. Martin et al. reported that the mean age was found 64 years with range from 45 to 78 years.

In this study male patients were predominant 60 (63.2%) with male-female ratio was 1.17:1. Mowla et al.[15] reported 63% were male and 37.0% were female. Martin et al.[20] reported male was 51.2% and female was 48.9%. Here 77.9% patients had mild symptoms; followed by 14.7% asymptomatic, 5.3% moderate and 2.1% had severe. Sannigrahi et al.[21] reported in addition to this, moderate levels of COVID-19 cases (per 100,000 people) were counted for United Kingdom, Netherlands, Portugal, France, Sweden, and Austria. Mowla et al.[15] observed no symptoms was found in 4 (4.0%) cases. Hasan et al.[22] observed COVID-19 manifests with a wide clinical spectrum ranging from asymptomatic patients to septic shock and multiorgan dysfunction[23]. COVID-19 is classified based on the severity of the presentation.[23] This disease may be classified into mild, moderate, severe and critical.[24]

Current study showed that 18.9% patients had other disease. Among them 12.6% patients had asthma and 5.3% hypertension. Mowla et al.[15] reported Hypertension (21%) and diabetes (16%) remains the most common comorbidities found in our patients like the world. Martin et al.[20] observed hypertension was 23.8%, diabetes 12.2%.

In current study 4 (4.2%) patients had hospital stay for 7 days and 3(3.2%) had hospital stay for 10 days. Mowla et al.[15] observed that the mean hospital stay was 7.77±5.62 days.

As we found, most of the common symptoms of COVID-19 was fever 68 (71.6%) followed by cough 45 (47.6%), sore throat 36 (37.9%), headaches 19 (20.0%), fatigue or tiredness 17 (17.9%), muscle or body aches 14 (14.7%), runny or stuff nose 12 (12.6%) and shortness of breath 11 (11.6%). Mowla et al.[15] reported patients got admitted predominantly with fever (69%), cough (54%), breathlessness (41%), fatigue (40%), anorexia (26%) and diarrhea (19%). Less frequent symptoms included chest pain, sore throat, headache and body ache, nasal congestion, anosmia, nausea and vomiting. The earliest reports from China described fever, dry cough, breathing difficulties (dyspnoea), headache and pneumonia as the typical clinical symptoms of COVID-19.[25,26] Studies from Europe first urged the international scientific community that the sudden anosmia or agausia need to be recognized as important symptoms of the COVID-19 infection[27]. Hasan et al. reported that the most common symptoms of patients include fever, fatigue, dry cough and diarrhea[22].

Conclusion

This data was taken from the mild to moderately affected COVID-19 patients and only two cases of severely affected patients. Yet, as we found, any age or sex may be affected and urban peoples are mostly vulnerable. Fever, cough, sore throat, headaches, fatigue or tiredness, muscle or body aches, runny or stuffy nose, shortness of breath, changed or lost sense of taste, chest congestion, skin rash, chills, loss of appetite, diarrhea, abdominal discomfort are the presenting features. And, respiratory distress (30 breaths/min) and/or finger oxygen saturation = /or < 93% at rest are features of severity.

Reference

1. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A Novel Coronavirus from Patients with Pneumonia in China, 2019. *N Engl J Med 2020*; 382: 727–733.
2. Mapping the Coronavirus Outbreak Across the World, Updated: 20 October 2020; https://www.bloomberg.com/graphics/2020-coronavirus-cases-world-map/
3. Chen Z, Hu J, Zhang Z, Jiang S, Han S, Yan D, Zhuang R, Hu B et al. Efficacy of hydroxychloroquine in patients with COVID-19: results of a randomized clinical trial. *Med Rxiv preprint*, 2020; doi: https://doi.org/10.1101/2020.03.22.20040758
4. Madison H, Koziatek C. A Case of COVID-19 Pneumonia in a Young Male with Full Body Rash as a Presenting Symptom, *Clinical Practice and Cases in Emergency Medicine*, 2020; 4: 219-221.
5. Sellevoll HB, Saeed U, Young VS, Sandbak G, Gundersen K, Mala T. Acute abdomen as an early symptom of COVID-19, *Tidsskrift for Den norske legeforening*, 2020; doi:10.4045/tidsskr.20.0262
6. Terpos E, Ntanasis-Stathopoulos I, Elalamy I, Kastritis E, Sergentanis TN, Politou M, Psaltopoulou T, Gerotziafas G, Dimopoulos MA. Hematological findings and complications of COVID-19, *American journal of hematology*, 2020; doi:10.1002/ajh.25829
7. WHO, Bangladesh. Situation report coronavirus (COVID- 19)-14. 01 June 2020. https://www.who.int/bangladesh/emergencies/coronavirus-disease-(covid-19)-update/coronavirus-disease-(covid-2019)-bangladesh-situationreports.
8. Guan WJ, Ni ZY, Hu Y, Liang WH, Ou CQ, He JX, et al. Clinical Characteristics of Coronavirus Disease 2019 in China, *N Engl J Med*, 2020; 382(18): 1708 1720.
9. de Lusignan S, Dorward J, Correa A, et al. Risk factors for SARS-CoV-2 among patients in the Oxford Royal College of General Practitioners Research and Surveillance Centre primary care network: a cross-sectional study, *Lancet Infect Dis* 2020.
10. Niedzwiedz CL, O'Donnell CA, Jani BD, et al. Ethnic and socioeconomic differences in SARS-CoV-2 infection: prospective cohort study using UK Biobank, *BMC Med* 2020; 18(1): 160.
11. Liu R, Han H, Liu F, et al. Positive rate of RT-PCR detection of SARS-CoV-2 infection in 4880 cases from one hospital in Wuhan, China, from Jan to Feb 2020. *Clin Chim Acta*, 2020; 505: 172–5 .
12. Rodriguez-Morales AJ, Cardona-Ospina JA, Guti_errez-Ocampo E, et al. Clinical, laboratory and imaging features of COVID-19: a systematic review and meta-analysis. *Travel Med Infect Dis*, 2020; 34: 101623.
13. Country comparison-median age. https://www.cia.gov/library/publications/resources/ the-world.factbook/fields/343rank.html. Accessed May 31 2020.
14. Deaths by age. https://www.iedcr.gov.bd/. Accessed May 31 2020.
15. Mowla SGM, Azad KAK, Kabir A, Biswas S, Islam MR, Banik GC, Khan MMH, Rohan KMI, Alam MA. Clinical Profile of 100 Confirmed COVID-19 Patients Admitted in Dhaka Medical College Hospital, Dhaka, Bangladesh. *J Bangladesh Coll Phys Surg*, 2020; 38: 29-36.
16. Gupta N, Agrawal S, Ish P, Mishra S, Gaind R, Usha G, et al. Clinical and epidemiologic profile of the initial COVID-19 patients at a tertiary care centre in India. *Monaldi Arch Chest Dis*, 2020; 90(1): 193-6.
17. Hossain I, Khan MH, Rahman MS, Mullick AR, Aktaruzzaman MM. The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) In Bangladesh: A Descriptive Study. *JMSCR*, 2020; 08(04): 544-551.
18. Richardson S, Hirsch JS, Narasimhan M, Crawford JM, McGinn T, Davidson KW, and the Northwell COVID-19.

19. Research Consortium. Presenting Characteristics, Comorbiditi es, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area. *JAMA*, 2020; 323(20): 2052-2059.
20. Martin CA, Jenkins DR, Minhas JS, Gray LJ, Tang J, Williams C et al. Socio-demographic heterogeneity in the prevalence of COVID-19 during lockdown is associated with ethnicity and household size: Results from an observational cohort study, *E Clinical Medicine*, 2020; 25: 100466.
21. Sannigrahi S, Pilla F, Basu B, Basu AS, Molter A. Examining the association between socio-demographic composition and COVID-19 fatalities in the European region using spatial regression approach. *Sustainable Cities and Society*, 2020; 62: 102418.
22. Hassan SA, Sheikh FN, Jamal S, Ezeh JK, Akhtar A. Coronavirus (COVID-19): A Review of Clinical Features, Diagnosis, and Treatment. *Cureus*, 12(3): e7355; doi: 10.7759/cureus.7355 23. Cascella M, Rajnik M, Cuomo A, Dulebohn SC, Napoli RD: Features, Evaluation and Treatment Coronavirus (COVID-19). Stat Pearls Publishing, *Treasure Island*, FL; 2020.
24. Wang Y, Wang Y, Chen Y, Qin Q: Unique epidemiological and clinical features of the emerging 2019 novel coronavirus pneumonia (COVID-19) implicate special control measures [Epub ahead of print]. *J Med Virol*, 2020, 10.1002/jmv. 25748.
25. Zhou P, Yang XL, Wang XG, Hu B, Zhang L, Zhang W, et al. A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature*, 2020; 579: 270-3.
26. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*, 2020; 395(10223): 497-506.
27. Lechien JR, Chiesa-Estomba CM, Siati DR, Horoi M, Bon SDL, Rodriguez A, et al. Olfactory and gustatory dysfunctions as a clinical presentation of mild- to-moderate forms of the coronavirus disease (COVID- 19): a multicenter European study [published online ahead of print, 2020 Apr 6]. *Eur Arch Otorhinolaryngol*, 2020; 1-11.

Study of The Association Between COPD And Stroke In Admitted Patients In Tertiary Care Hospital

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Abstract

Background: Chronic obstructive pulmonary disease (COPD) has been identified as a risk factor for cardiovascular diseases such as myocardial infarction. It is evident that COPD is linked to cardiovascular disease.Several studies demonstrated that COPD may also be a risk factor for stroke. Objective: To determine the relationship between COPD and stroke patients admitted in tertiary care hospital.

Materials and methods: This observational cross sectional study was conducted in the Department of Medicine, Gazi Medical College and Hospital, Khulna from June 2016 to June 2018. Patients with and without COPD and determine whether individuals with COPD are at increased risk of subsequent first acute MI or stroke.

Results: Out of 100 patients hypertension was 21(42.0%) in COPD patients and 41(82.0%) in stroke patients. Mental disorder was 19(38.0%) and 29(58.0%0 in COPD and stroke patients respectively. Diabetes was 9(18.0%) in COPD patients and 18(36.0%) in stroke patients. Atrial fibrillation was 1(2.0%) in COPD patients and 15(30.0%) in stroke patients. Hypertension, mental disorder, diabetes mellitus and artial fibrillation was significantly higher in stroke patients than COPD patients. Liver cirrhosis, hyperlipidemia, congestive heart failure, traumatic brain injury, anemia, renal dialysis, epilepsy were not statistically significant ($p>0.05$) between two groups.

Conclusion: COPD are substantially more likely to have pre-existing hypertension, mental disorder, diabetes mellitus and artial fibrillation or previous strokes are at high risk of acute arteriovascular events. The management of COPD as well as preventive therapy is essential to decrease the risk for stroke and should be at special attention in pulmonary medicine and neurology.

Key words: COPD, Stroke, Cardiovascular diseases.

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Introduction

Chronic obstructive pulmonary disease (COPD) has been identified as a risk factor for cardiovascular diseases such as myocardial infarction. The role of COPD in cerebrovascular disease is, however, less certain. Although earlier studies have suggested that the risk for stroke is also increased in COPD.[1] Chronic obstructive pulmonary disease (COPD) is currently the fourth leading cause of death in the world and its incidence and prevalence is on the rise. It is evident that COPD is linked to cardiovascular disease. In recent years, several studies demonstrated that COPD may also be a risk factor for stroke, another major cause of death worldwide. [2]

Stroke is another growing global health problem.[3,4] There is growing interest toward the

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links between these two leading causes of death and disability. It has been demonstrated that there is a tight interplay between COPD and cardiovascular disease.[5,6] But it has also been suggested that COPD is significantly more prevalent among patients with stroke and that the co-existence of both is associated with grim outcomes.[7] These findings have been consistently observed in studies evaluating all different subtypes of stroke (ischemic, intracerebral, or subarachnoid hemorrhage).[8] Taking in consideration that COPD has multiple comorbidities it is hard to say whether COPD is an independent risk factor for stroke or it is due to confounding effect.

Materials and Methods

An observational cross sectional study was conducted in the Department of Medicine, Gazi Medical College and Hospital (GMCH), Khulna from June 2017 to June 2018. The aim of the study was to the association between COPD and Stroke in admitted patients in tertiary care hospital. Patients were defined as having COPD if they were aged >35 years and had a relevant diagnosis recorded prior to the baseline date. Where possible, in those with COPD the percentage predicted forced expiratory volume in 1 s (FEV1) was calculated using standard reference and patients were grouped according to disease severity using British Thoracic Society (BTS) guidelines. Details of sex, age and smoking status, region of residence and level socio-demographic indicators were also extracted. All patient records were searched to identify diagnoses of CVD, stroke and DM. Our definition of CVD included diagnoses of angina, myocardial infarction (MI), heart failure, peripheral vascular disease and aortic aneurysm, and having undergone a previous angioplasty procedure. Cardiac arrhythmias and valvular heart disease were excluded because of their wide range of potential aetiologies; right-sided heart disease was excluded as it frequently results from primary pulmonary pathology. Our definition of stroke included diagnoses of subarachnoid and intracranial haemorrhage and transient ischaemic attack. Cross-sectional analysis to establish the prevalence of comorbid disease among patients with and without COPD and a survival analysis to determine whether individuals with COPD are at increased risk of subsequent first acute MI or stroke. Our primary outcome was the relation between COPD and a diagnosis of each stroke. Separate multivariable models were built for each disease to look for confounding or effect modification by age, sex, smoking status and each of the other comorbidities of interest. Patients with a previous diagnosis of stroke or CVD prior to the baseline date were excluded from the stroke and acute MI analyses respectively as the risk of a second event is likely to differ from that of the first. End of follow-up was defined as the last date of data collection at the patient's practice or date of death or transfer to another practice. Increase in all-cause mortality in those with COPD has been determined previously using this dataset and was therefore not repeated Several sensitivity analyses were performed to explore the possible effects of misclassification of smoking status. In brief, we repeated our analyses recategorising ex-smokers as current smokers and those with unknown smoking status as never smokers and as current smokers. We also performed the analyses excluding those with COPD but without a record for FEV1. Finally, we repeated the survival analysis for both outcomes excluding patients with previous diagnoses of either stroke or CVD for comparison.

Results

Table-I shows majority 17(34.0%) patients belonged to age 51-60 years in COPD patients and 51.2±11.5 years in stroke patients. The mean age was found 49.5±13.7 years COPD patients and 51.2±11.5 years in stroke patients. The difference was not statistically significant ($p>0.05$) between two groups. Table II shows male was found 29(58.0%) in COPD patients and 35(70.0%) in stroke patients. Female was 21(42.0%) and 15(30.0%) in COPD and stroke patients respectively. The difference was not statistically significant ($p>0.05$) between two group. Table III shows ex-smoker was found 9(31.0%) in COPD patients and 11(31.4%) in stroke patients. Current smoker was 17(58.6%) in COPD patients and 22(62.9%) in stroke patients. Never smoker was 3(10.3%) and 2(5.7%) in COPD and stroke patients respectively. The difference was not statistically significant ($p>0.05$) between two groups. Table IV shows hypertension was found 21(42.0%) in COPD patients and 41(82.0%) in stroke patients. Mental disorder was 19(38.0%) and 29(58.0%) in COPD and stroke patients respectively. Diabetes was found 9(18.0%) in COPD patients and 18(36.0%) in stroke patients. Atrial fibrillation was 1(2.0%) in COPD patients and 15(30.0%) in stroke patients.

Hypertension, mental disorder, diabetes mellitus and artial fibrillation was significantly higher in stroke patients than COPD patients. Liver cirrhosis, hyperlipidemia, congestive heart failure, traumatic brain injury, anemia, renal dialysis, epilepsy were not statistically significant (p>0.05) between two groups.

Table I

Distribution of the study patients by age (n=100)

Age (years)	COPD (n=50)		Stroke (n=50)		P value
	n	%	n	%	
≤30	3	6.0	2	4.0	
31-40	5	10.0	4	8.0	
41-50	15	30.0	13	26.0	0.503^{ns}
51-60	17	34.0	19	38.0	
>60	10	20.0	12	24.0	
Mean±SD	49.5±13.7		51.2±11.5		

ns=not significant
P value reached from unpaired t-test

Table II:

Distribution of the study patients by sex (n=100)

Sex	COPD (n=50)		Stroke (n=50)		P value
	n	%	n	%	
Male	29	58.0	35	70.0	0.211^{ns}
Female	21	42.0	15	30.0	

s=significant
P value reached from Chi square test

Table III

Distribution of the study patients by smoking status (n=64)

Smoking status	COPD (n=29)		Stroke (n=35)		P value
	n	%	N	%	
Ex-smoker	9	31.0	11	31.4	
Current smoker	17	58.6	22	62.9	0.786 (ns)
Never smoked	3	10.3	2	5.7	

ns=not significant
P value reached from Chi square test

Table IV

Distribution of the study patients by medical condition (n=100)

Medical condition	COPD (n=50)		Stroke (n=50)		p value
	N	%	n	%	
Hypertension	21	42.0	41	82.0	0.001^{s}
Mental disorder	19	38.0	29	58.0	0.045^{s}
Diabetes	09	18.0	18	36.0	0.042^{s}
Liver cirrhosis	07	14.0	9	18.0	0.585^{ns}
Hyperlipidemia	6	12.0	4	8.0	0.505^{ns}
Anaemia	5	10.0	3	6.0	0.461^{ns}
Congestive heart failure	4	8.0	2	4.0	0.399^{ns}
Traumatic brain injury	4	8.0	1	2.0	0.169^{ns}
Atrial fibrillation	1	2.0	15	30.0	0.001^{s}
Renal dialysis	1	2.0	2	4.0	0.557^{ns}
Epilepsy	1	2..0	1	1.0	1.000^{ns}

s=significant; ns=not significant

P value reached from Chi square test

Discussion

In present study showed majority 17(34.0%) patients belonged to age 51-60 years in COPD patients and 51.2±11.5 years in stroke patients. The mean age was found 49.5±13.7 years COPD patients and 51.2±11.5 years in stroke patients. The difference was not statistically significant (p>0.05) between two groups. Corlateanu et al.[2] reported the prevalence of stroke among patients with versus without COPD was evaluated in a nationwide study from Sweden where COPD patients between 40 and 84 years of age. Paradoxically the greatest increase in the rate of stroke was found in the youngest age groups compared with the older age groups of COPD.[9] Several studies suggest that the risk for all-cause strokes in COPD increases approximately by 20%, but there are data demonstrating that this risk may be even higher.[9] Windsor et al.[10] also reported the median age of the population was 76 years (interquartile range: 69–82).

In current study observed that male was found 29(58.0%) in COPD patients and 35(70.0%) in stroke patients. Female was 21(42.0%) and 15(30.0%) in COPD and stroke patients respectively. The difference was not statistically significant (p>0.05) between two group. Lin et al.[11] compared with patients without COPD stroke patients with previous COPD had higher proportions of males. Windsor et al.[10] reported that the study population consisted of more men than women (53.9% vs 46.1%).

In this study observed that ex-smoker was found 9(31.0%) in COPD patients and 11(31.4%) in stroke patients. Current smoker was 17(58.6%) in COPD patients and 22(62.9%) in stroke patients. Never smoker was 3(10.3%) and 2(5.7%) in COPD and stroke patients respectively. The difference was not statistically significant (p>0.05) between two groups. Feary et al.[9] reported eighty-six percent of patients with a diagnosis of COPD were current or ex-smokers. It is well known that smoking increases the risk of stroke as well as the risk of fatal events.[12] The Rotterdam Study demonstrated that after additional adjusting for smoking the risk of stroke among COPD patients versus controls was attenuated with HR, 1.09 (0.91–1.31) for all stroke; HR, 1.13 (0.91–1.42) for ischemic stroke; and HR 1.53 (0.91–2.59) for hemorrhagic stroke.[13] These findings suggest that smoking history is only partly responsible for the increased incidence of stroke and therefore, the presence of COPD may play an independent role in the pathogenesis of stroke, especially of hemorrhagic etiology.

In this study observed that hypertension was found 21(42.0%) in COPD patients and 41(82.0%) in stroke patients. Mental disorder was 19(38.0%) and 29(58.0%) in COPD and stroke patients respectively. Diabetes was found 9(18.0%) in COPD patients and 18(36.0%) in stroke patients. Atrial fibrillation was 1(2.0%) in COPD patients and 15(30.0%) in stroke patients. Hypertension, mental disorder, diabetes mellitus and artial fibrillation was significantly higher in stroke patients than COPD patients. Liver cirrhosis, hyperlipidemia, congestive heart failure, traumatic brain injury, anemia, renal dialysis, epilepsy were not statistically significant (p>0.05) between two groups. Lin et al.[11] compared with patients without COPD, stroke patients with previous COPD had higher proportions of hypertension, mental disorders, diabetes, congestive heart failure, traumatic brain injury, dementia, hyperlipidemia, anemia, atrial fibrillation, liver cirrhosis, peripheral vascular disease, renal dialysis, obesity. Corlateanu et al.[2] reported COPD may be one of the risk factors associated with atherothrombotic stroke along with diabetes, hypertension, and transient ischemic attack. The major risk factors for stroke (which combined account for 88.1% of population-attributable risks) are history of hypertension, current smoking, waist-Hip ratio, diet risk score, physical inactivity, diabetes mellitus, alcohol intake, psychosocial stress, cardiac causes, and ratio of apolipoproteins B to A1. These risk factors can also be seen in COPD patients and thus the link between COPD and stroke can be to some degree due to confounding effect. Windsor et al.[10] observed that hypertension, smoking, dyslipidemia, and diabetes were all strongly associated with increased odds of stroke. There were also strong associations between stroke and peripheral arterial disease, heart failure, atrial fibrillation, and previous use of cardiac medications.

Conclusion

COPD is substantially more likely to have pre-existing hypertension and artial fibrillation or previous strokes are at high risk of acute arteriovascular events. It is evident that COPD is linked to cardiovascular disease. Several studies demonstrated that COPD may also be a risk factor for stroke. COPD has multiple

comorbidities..It is hard to say whether COPD is an independent risk factor for stroke or it is due to confounding effect. National COPD guideline to management of COPD as well as preventive therapy is essential to decrease the risk for stroke and should be at special attention in pulmonary medicine and neurology.

Reference

1. Morgan AD, Sharma C, Rothnie KJ, Potts J, Smeeth L and Quint JK. Chronic Obstructive Pulmonary Disease and the Risk of Stroke, Ann Am Thorac Soc, 2017; 14(5):754–765
2. Corlateanu A, Covantev S, Mathioudakis AG, Botnaru V, Cazzola M & Siafakas N. Chronic Obstructive Pulmonary Disease and Stroke, COPD: Journal of Chronic Obstructive Pulmonary Disease, 2018;15(4):1-9
3. Lozano R, Naghavi M, Foreman K, Lim S, Shibuya K, Aboyans V, et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the global burden of disease study 2010. Lancet. 2012;380(9859):2095–2128.
4. Feigin VL, Krishnamurthi R, Parmar P, Norrving B, Mensah GA, Bennett DA, et al. Update on the global burden of ischaemic and haemorrhagic stroke in 1990–2013: the GBD 2013 study. Neuroepidemiology. 2015; 45(3):161–176.
5. de Lucas-Ramos P, Izquierdo-Alonso JL, Moro JMR-G, Frances JF, Lozano PV, Bellón-Cano JM, Chronic obstructive pulmonary disease as a cardiovascular risk factor: results of a case–control study (CONSISTE study). Int J Chron Obstruct Pulmon Dis. 2012;7:679–686.
6. Rothnie KJ, Yan R, Smeeth L, Quint JK. Risk of myocardial infarction (MI) and death followingMI in people with chronic obstructive pulmonary disease (COPD): a systematic review and meta-analysis. BMJ Open. 2015;5(9):e007824.
7. Lekoubou A, Ovbiagele B. Prevalance and influence of chronic obstructive pulmonary disease on stroke outcomes in hospitalized stroke patients. eNeurologicalSci. 2017;6:21–24.
8. Soderholm M, Inghammar M, Hedblad B, Egesten A, Engstrom G. Incidence of stroke and stroke subtypes in chronic obstructive pulmonary disease. Eur J Epidemiol. 2016;31(2):159–168.
9. Feary JR, Rodrigues LC, Smith CJ, Hubbard RB, Gibson JE. Prevalence of major comorbidities in subjects with COPD and incidence of myocardial infarction and stroke: a comprehensive analysis using data from pri mary care. Thorax. 2010;65(11):956–962.
10. Windsor C, Herrett E, Smeeth L, Quint JK. No association between exacerbation frequency and stroke in patients with COPD. International Journal of COPD 2016:11 217–225.
11. Lin CS, Shih CC, Yeh CC, Hu CJ, Chung CL, Chen TL, et al. Risk of Stroke and Post-Stroke Adverse Events in Patients with Exacerbations of Chronic Obstructive Pulmonary Disease. PLoS ONE, 2017;12(1): e0169429.
12. Lund Haheim L, Holme I, Hjermann I, Tonstad S. Risk-factor profile for the incidence of subarachnoid and intracerebral haemorrhage, cerebral infarction, and unspecified stroke during 21 years' follow-up in men. Scand J Public Health. 2006;34(6):589–597.
13. Portegies ML, Lahousse L, Joos GF,Hofman A, Koudstaal PJ, Stricker BH,et al. Chronic obstructive pulmonary disease and the risk of stroke. the rotterdam study. Am J Respir Crit Care Med. 2016;193(3): 251–258.

Congenital Male Anterior Urethral Diverticulum: A Case Report

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Abstract

Background: Urethral diverticulum is a localized out-pouching or fusiform dilatation of the urethra. It is an uncommon clinical entity affecting both males and females. Congenital diverticulum of the anterior urethra in male is uncommon and typically occurs at the penoscrotal junction.
This case: This is a report of a large congenital diverticulum in the anterior urethra in a 9-year-old male child who presented with ventral penile swelling, just proximal to corona which is quite rare. The diagnosis was made on RUG and MCU. Patient's renal functional status was normal. This congenital diverticulum was successfully treated with open diverticulectomy and urethroplasty.
Conclusion: Surgical correction is the treatment of symptomatic urethral diverticulum case. But follow up may be an option in asymptomatic cases.

Key word: Symptomatic urethral diverticulum, Surgical correction

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Introduction

Diverticulum of the urethra is a saccular or tubular dilatation of the urethral wall that communicates with the urethral lumen by means of a neck. Urethral diverticulum may be congenital or acquired. Congenital diverticulum is rare. Urethral diverticulum generally located in the ventral aspect of anterior urethra, though it can be found anywhere from bulbous to mid pendulous portion of urethra. Congenital anterior urethral diverticulum (CAUD) is rare in male. These diverticula may be either saccular or tubular. The saccular type has a true neck and may cause urinary obstruction since its posterior segment compresses the urethra and interrupts the urinary flow when the saccular cavity fills at the beginning of micturition. The tubular or diffuse type is located more proximally to the urethral bulb, where urinary stasis occurs along with its complications, such as urinary stasis and calculosis[1]**.** The treatment options in AUD include endoscopic division of distal lip of diverticulum, excision of diverticulum with primary repair, marsupialisation with staged urethroplasty, or even suprapubic diversion followed by definitive repair[2]. In this paper, we are presenting our experience of AUD which was managed by excision of diverticulum with primary repair.

The Case

A 9-year-old male presented with complaints a swelling on the ventral aspect of penile urethra (Figure-1 & 2).

The size of the swelling had increased gradually over years. On general examination, he was well nourished and normotensive. On Local examination, swelling was a soft cystic, fluctuant, and compressible, and it collapsed completely on manual pressure with urine coming out per urethra. Urine analysis, routine blood counts and blood urea and serum

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Fig-1: Anterior urethral diverticulum



Fig 2: Globular shape diverticulum

creatinine were normal. Ultrasonography showed both kidneys normal in size and shape and with normal urinary bladder. Retrograde urethrogram & Micturating urethrogram was done and it showed the presence of a wide-mouthed diverticulum in distal penile urethra and the proximal lip of diverticulum forming an acute angle with normal caliber proximal urethra and normal urinary bladder without any vesicoureteric reflux (Figure 3).

Patient was managed by open procedure. The diverticulum was opened by incision on the ventral aspect of penile shaft (Fig-4).



Fig-3: Ascending urethrogram showing diverticulum

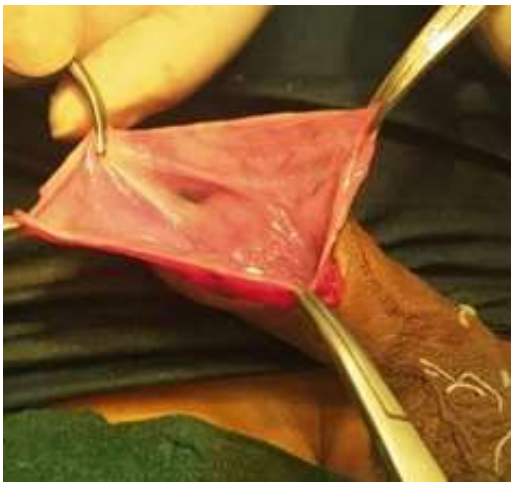


Fig 4: Open the diverticulum

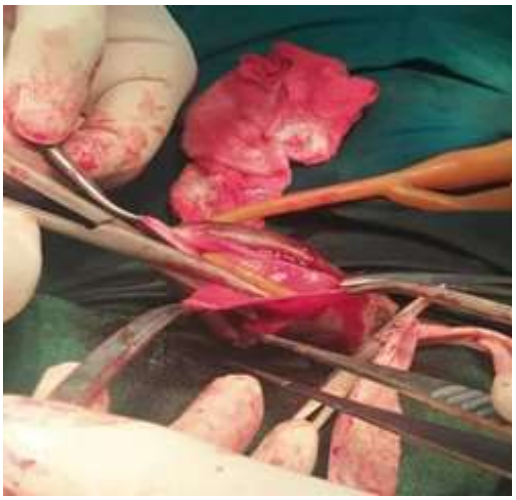


Fig-5: Excision of diverticulum

The patient underwent an open diverticulectomy and urethroplasty with reinforcement of the corpus spongiosus and second layer was done by double breasting of dartose muscle (Figure-6 & 7).



Fig-6: Reconstruction of urethra

Post-operative period was uneventful (Fig-8). Catheter was removed after 21 days and patient could pass urine voluntarily with good stream without any leak.



Fig-7: Post-operative state



Fig-8: Post-operative state of penis.

Discussion

The male congenital anterior urethral diverticulum is a rare defect, sparsely referred in the literature. There are several reports that have tried to establish its true prevalence, within a range of 0.6% - 3.0%. Because its symptoms are unspecific, many times they go unnoticed and the diagnosis is therefore delayed. The urethral diverticulum is a herniation of the mucosa through the muscular layers of the urethra that communicate with the urethral light. It's a rare clinical entity with an unknown prevalence but that some series situate around 1-6% in women, while in men this prevalence is lower. Most patients who present urethral diverticulum are between 30 and 70 years old [2]. Congenital anterior urethral diverticulum (CAUD) may be found all along the anterior urethra but is usually located between the bulbous and the mid penile part. It is rare for AUD to be in distal urethra near the coronal level as in the present case of this paper.[2]

Urethral diverticulum can be classified as congenital or acquired, the later being the most frequent[3]. There are several theories about the development of the congenital urethral diverticulum. The most common within the scientific community are described below:

1. Defective closure of the bulbous section of the urethra due to the partial lack of the spongy tissue. It often occurs in the ventral aspect of the anterior urethra.
2. Distal obstruction of the urethral valve. (Sen et al., 1989)
3. The urethral diverticulum mainly occurs in the expansion of the cystic duct, the Cowper's gland or another cystic urethral gland[2].

The acquired urethral diverticulum is produced in relation with stenosis, infections, traumas or after surgical procedures (hypospadias, artificial sphincter placement, prostate or bladder transurethral resection). It is characterized by being encased in granulation tissue and its wall is devoid of smooth muscular fibers. It can be often located in the posterior urethra level [4].

The symptoms depend largely on the size of the diverticulum. The smaller ones often show no symptoms, becoming evident only when other problems such as urethritis occur. The larger diverticula tend to retain urine, harboring infection and leading to difficulties in micturition and dysuria[1]. In our patient, there were complaints of swelling on ventral aspect of urethra, mild dysuria and difficulties in micturition.

Diagnosis of a urethral diverticulum is often clinical. On clinical examination, the mass is palpated in the ventral region; it disappears when compressed and is followed by outflow of urine or infected material through the urethra. Confirmation of the diagnosis is made through ascending urethrogram and micturating cystourethrogram[1]. Besides this ultrasound and MRI, as well as the urethral cystoscopy will help us to set a diagnosis. Also, they provide an accurate reflection of the anatomy of the urethral diverticulum and its relation with the urethra and the bladder neck[5].

The most commonly reported associated complications are urinary tract infection, fistulas and stones formation in the diverticulum. Though adenocarcinoma has been reported to arise as a complication from urethral diverticulum, none was reported in our Patient.[6] The treatment of the diverticulum will depend on its features and the clinical findings. In the case of asymptomatic patients, it is better to choose a conservative treatment and a follow up.

In symptomatic patients it's possible to offer a surgical resection. There are several therapeutic approaches: (a) Transurethral, open (b) Marsupialization (c) Endoscopic deroofing (d) Fulguration (e) Surgical cut and obliteration with oxidized cellulose or polytetrafluoroethylene (f) Coagulation (g) Resection with reconstruction.

Nowadays, resection with reconstruction technique is the most common surgical approach for urethral diverticulum[2]. But in our patient, we have done excision and primary reconstruction.

Conclusion

There are several therapeutic options that go from observation to surgery. In asymptomatic patients it is possible to choose a follow up. Surgery is reserved for symptomatic patients as it has been in our patient.

References

1. K Natarajan, P Sivaram, Joseph Thomas, K Sashidharan. Congenital diverticulum of male urethra. Journal of Department of Urology, Kasturba Medical College, Manipal, Karnataka., India*, 2001;* 18: 86-88.
2. Morales NO, Talavera JR, Valenci ACAAR, Martínez BBALG. Male Congenital urethral diverticulum: case report and review of the literature. *Adv J uro nephron*, 2020; 2: 69-71.
3. Ikwuezunma NG, MacLachlan L, ElZawahry A, Rames R, et al. Simple vs Complex Urethral Diverticulum: Presentation and Outcomes. *Urology*, 2014; 84: 1516-1519.
4. Cinman, Nadya M, Jack W McAninch, Allison S Glass, Uwais B Zaid, Benjamin N Breyer, et al. Acquired Male Urethral Diverticula: Presentation, Diagnosis and Management. *The Journal of urology, 2012; 188*: 1204-1208.
5. Naveen T, Sabale VP, Mane D, Mullay A. Male Urethral Diverticulum Uncommon Entity: Our Experience. *Urology*, 2016; Annals 8: 478482.
6. Popoola AA, Oyinloye O, Irand Aremu I Bt. Acquired Male Urethral Diverticulum. *The Nigerian postgraduate medical journal*, 2009.

Editorial policy & Instruction to Authors

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Ringsven MK, Bond D. Gerentology and leadership skills for nurses. 2nd ed Albany(NY): Delmar publishers; 1996. p 28-35.
editor (s), compiler(s) as author (s)
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Chapter in a book
Philips SJ, Whisnant JP. Hypertension and stroke. In: Laragh JH, Brenner BM, editors. HYpertension: pathophysiology, diagnosis and management 2nd ed. New York: Raven press; 1995. p465-78.

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Kaul S, Diamond GA. Good enough: a primer on the analysis and interpretation of noninferiority trials. Ann Intern Med (internet.2006 jul4 (cited 2007 jan4); 145 (1): 662-9 Available from: http:/www.annals.org/cgi/reprint/145/1/62.pdf.

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