DISCUSSION

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Many of congenital eyelid anomalies are not difficult to diagnose, yet curative treatment may be challenging. Nevertheless, it is challenging to assess infants and toddlers due to the fact that this group of children has short attention spans and limited expressive skills. Furthermore, the presence of a disability can greatly complicate the assessment process particularly if the child has a motor or sensory impairment.

It should be noted that this work is one of the few studies which provides ophthalmologists with valuable information about congenital eyelid anomalies in a general population. The paucity of similar reports also limits our ability to compare our results in Alexandria with other regions of the world. Considering the few epidemiological studies on congenital eyelid abnormalities, the objectives of this study were to describe its prevalence among Alexandria Main University Pediatric Ophthalmology Outpatients' Tertiary referral clinic.

The present study was conducted from December 2013 to May 2014 for screening of patients aging less than 15 years having eyelid abnormalities including tearing, ptosis, ectropion, entropion, coloboma, dermoid and symblepharon.

This study included 9484 patients, 80 of which (0.8%) showed different eyelid abnormalities. The examination technique used had many advantages. It was objective, simple to perform and well tolerated by tested infants, children and their parents. It enabled the examiner to acquire all the information needed in an average of 5 to 10 minutes and didn't require further interpretation.

The examination was performed by an ophthalmologist. Care, follow-up and parental education were integral and crucial components of this vision screening program.

The present study had 39 cases with ptosis contributing to 0.4% of total examined cases, one case with hemangioma with a percent of 0.01% of total examined cases, 15 cases with dermoid cyst counting to 0.16% of total cases examined. A study about prevalence of congenital eye anomalies was conducted on 485 admissions to the pediatric eye center of the Korle-Bu Teaching Hospital, Ghana from July 1, 2004 to December 31, 2009 and 263 (54%) were diagnosed with at least one eye anomaly. There were 15 cases of ptosis, having a percentage of 3.1 of total patients, 7 cases of hemangioma contributing to 1.4% of total patients examined, 6 cases of congenital NLDO counting a 1.2 % of total eye anomalies and 7 cases of dermoid cyst with a percent of 1.4 of total patients examined.[71]

The difference between the results between the two studies maybe contributed to the fact that Ghana's result was done over a period of 6 years from July 1, 2004 to December 31, 2009, while as this study had a duration of six months respectively.

The present study had 9484 patients examined with 80 of them (0.8%) showed different eyelid anomalies. The study had 39 cases (48.75%) of total affected cases having ptosis ranging between 9 month and 11 years with a mean age of 5.34 and SD (±3.81). A study made by Makonata et al was held on all patients attending to the Beni-Sueif university ophthalmology outpatients' clinic from March 2010 to May 2011having eyelid abnormalities. The patients' age ranged from three months to 80 years with a mean age of 51.9 and SD (±17.1). The study included 2533 patients who were examined, 142 of them (5.6%) showed different eyelid abnormalities. Fourteen patients (9.9%) having ptosis were

between three months and 50 years with a mean age of 12.7 and SD (±15.7).[72] The difference in results is attributed to different age groups, different duration and different geographical area.

In this study, a total of 39 cases were diagnosed with ptosis over a 6-month period from December 2013 through May 2014 on patients attending Alexandria Main University Pediatric clinic. A family history of congenital ptosis was not found at any of the studied patients. Fifteen of studied cases had bilateral ptosis (38.4%) while 24 manifested a unilateral ptosis (61.6%). Eighteen cases were found to have left upper lid affection (75%) while as 6 eyes had right upper eyelid affection contributing to (25%) respectively. Twenty five patients were males while as 14 were females contributing to a ratio of 1.8:1 male to female. Griepentrog GJ1 et al conducted a study to report the incidence and demographics of childhood ptosis diagnosed over a 40-year period on residents of Olmsted County, Minnesota, from January 1, 1965, through December 31, 2004. A total of 107 children were diagnosed with ptosis during the 40-year period, yielding an incidence of 7.9 per 100000 younger than 19 years. Ninety-six (89.7%) of the 107 had congenital-onset disease. Three (4%) of the simple congenital ptosis cases were bilateral and 55 (68%) of the unilateral cases involved the left upper eyelid.[73] Left eye predominance in unilateral congenital ptosis has not been reported in prior reports. The difference between the results may be due to the different studies' durations and the fact that Minnesota's study was conducted as a screening on all Olmsted's residents.

In this study, no cases of congenital ectropion, entropion nor euryblepharon were found. This is in accordance with Balogun et al who conducted a retrospective audit of all consecutive patients who presented with ectropion or entropion to the oculoplastics sub-Saharan tertiary eye care unit. The study period covered January 2008-June 2012. A total of 53 patients were identified constituting 37.3% of all eyelid diseases. Forty-eight (90.6%) had ectropion, Five (9.4%) had entropion. The median age group affected was 30-39 years (26.4%). There were no cases of congenital ectropion or entropion. The leading etiological factor was trauma in 36 cases (67.9%).[74] Being conducted in a tertiary referral clinic, the paucity of detecting congenital ectropion and entropion in our study is most properly explained.

In this study, twelve cases having eyelid colobomas (0.12%) of all examined cases were detected. Their age ranged between 2 and 9 years respectively. One case was a male and eleven cases were females with a ratio 1:11. Two cases had it in the right eye and there no bilaterally affected cases detected. The studies conducted to find the prevalence of eyelid colobomas were lacking except for a study done in university college of London where the prevalence of eyelid colobomas was found to be 7.5 per 10,000 live births denoting the rarity of this disease.[75]

Out of 9484 cases studied in the present work, one left eye periocular hemiangioma female aged 1.3 years was detected yielding an incidence of 0.1 per 1000 of total examined cases. On the contrary, one right eye lower eyelid hemiangioma was detected by Alniemi et al who recorded all patients less than 19 years of age diagnosed as having periocular infantile hemangiomas while residing in Olmsted County, Minnesota, from January 1, 1965, through December 31, 2004. Forty three children were diagnosed as having eye hemangiomas during the 40-year period, yielding an incidence of 5.4 per 100,000 individuals younger than 19 years. Thirty children (70%) were female. Forty one patients (95%) had unilateral disease, and 37 hemangiomas (86%) were located on the upper eyelid.[76]

This study detected 15 dermoid cases (0.16%) of examined cases. Nine cases were males (60%). Ten cases had it in the right eye (66.6%). The age of the cases ranged from 1.3-13 years respectively. Dermoid cysts are often cited as one of the most common orbital tumors in children, accounting for 46% of childhood orbital neoplasms.[77] They make up 3-9% of all orbital masses.[78]

The present study detected 2 cases with Kohn Romano syndrome (BPES) comprising (0.02%), with a 1:1 male to female ratio. None of the patients had ocular misalignment or nystagmus. Dawson et al carried out a retrospective review on 204 patients with blepharophimosis, (blepharo) ptosis and epicanthus inversus syndrome (BPES) in Moorfields Eye Hospital, London, U.K. Forty (20%) had manifest strabismus. Twelve (6%) patients had nystagmus.[79]

This study had one eye with upper eyelid lagophthalmos (0.01%) of all examined cases at his right eye, the patient aged 4 months and was prescribed topical lubricants and referred to the occuloplastic clinic for further investigations and management. Primary congenital lagophthalmos has been described only relatively rarely as individual case reports. Collin et al conducted a series study on 22 patients with congenital lagophthalmos who were examined over a 10-year period in Moorfields Eye Hospital. Sixteen of the 19 patients with upper lid retraction underwent upper lid lowering. Twelve achieved a successful result.[80]

This study had one female case with distichiasis aged 12 years who complained of continuous burning sensations, redness and blurring of vision. She had no family history and upon examination she showed no other accompanying eye syndromes. O'Donnell et al conducted a study on 24 patients having distichiasis who attended Moorfields Eye Hospital over a period of 13 years (1980-1993). Fifty percent of patients in this study gave a family history of distichiasis. The average age of patients was 9.7 years with a range of 1.8 to 50 years. There were 11 male and 13 female patients.[81] The difference in age groups and duration of both studies may explain the difference in results acquired.

This study had 6 cases with dermolipoma contributing to 0.6 per 1000 examined patients. All cases were males and had it at their right eye. Since no previous studies have proved any significant results contributing to preference of dermolipoma's occurrence at right eye or in males, our results would encounter to questionable significance.

This study had one case with telecanthus. The patient was a 3 month old male with no family history. He was kept on follow up.

The present study had 2 cases of symblepharion (0.2 per 1000 examined patients) in association with nasolacrimal duct obstruction. Both cases were females and aged 3, 4 years respectively. One had it in the right eye while as the other was in the left eye leaving a ratio of 1:1. There were no similar studies found to compare our results with theirs.

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SUMMARY

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Children are wonderful joys in our lives and have a unique perspective of the world. The pediatric population has unique ophthalmologic needs. Challenges that are intrinsic to the detection of the eye disease in the pediatric population include the vast number of children and the inability of the child to describe symptoms that indicate pathology presence. These difficulties highlight the importance of vision screening among pediatric population.

Pathology detected using screening of visual system should be considered to have similar guidelines as for all types of screening.

The World Health Organization has mandated guidelines for a successful screening program as a part of Public Health Program. Generally, the guidelines require that the condition being screened for, is relatively common, of public health concern and that the successful detection and treatment exist. These guidelines were designed to be applied to all types of screening. Most pediatric eye diseases and test methods fit the WHO guidelines although for some conditions (particularly amblyogenic factors) the natural history remains somewhat unknown and the latent period is quite prolonged.

Early identification and treatment of risk factors for congenital eyelid anomalies enable prevention of amblyopia. Diagnosis and treatment of amblyopia at an earlier age may lead to better and more stable final visual results, with shorter treatment durations, more rapid improvement in visual acuity and better overall compliance with treatment regimens.

The aim of this work is to study the prevalence and modalities of treatment of congenital and developmental eyelid. The method was simple, quick, easy to perform and well tolerated by tested patients and their parents.

The present study aimed to provide data on early detection of congenital eyelid anomalies in children. Examination was done in pediatric ophthalmology clinic in Alexandria University Main Hospital from December 2013 to May 2014.

Examined children for congenital eyelid anomalies were 9484 (18968 eyes) in number. Their parents' oral consents were taken and suspected ones were referred to Oculoplastic clinic for further investigations and treatment.

Eighty patients (with nighty nine affected eyes) with congenital eyelid anomaly were detected contributing to 8/1000 of studied cases among the six month duration. The cases had a mean age 4 years of age, 44 were males (55%) and 36 were females (45%). The consanguinity was negative in all the cases (100%) of cases, with statistically insignificant value.

At the age of (less than a year) 2845 infants were examined (5690 eyes) from which 26 eyes (4.6/1000) were found to have congenital eyelid anomalies contributing to 26.3% of affected eyes as follows: 3 eyes had ptosis, 10 eyes had colobomas, 10 eyes had dermoids, 1 eye had lagophthalmos and 2 eyes had telecanthus.

At the age of (one to less than five years) 3319 toddlers were examined (6638 eyes) from which 36 eyes (5.4/1000) were found to have congenital eyelid anomalies contributing to 36.4% of affected eyes as follows: 21 eyes had ptosis, 1 eye had coloboma, 1 eye had dermoids, 1 eye had hemangiomas, 2 eyes had symblepharon, 4 eyes had kohn romano and 6 eyes had dermolipoma.

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At the age of (five to less than ten years) 2281 children were examined (4562 eyes) from which 29 eyes (6.3/1000) were found to have congenital eyelid anomalies contributing to 29.3% of affected eyes as follows: 26 eyes had ptosis, 1 eye had coloboma and 2 eyes had dermoids.

At the age of (ten to less than fifteen year) 1039 children were examined (2078 eyes) from which 8 eyes (3.8/1000) were found to have congenital eyelid anomalies contributing to 8% of affected eyes as follows: 4 eyes had ptosis, 2 eyes had dermoids and 2 had districhiasis.

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