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Chalazion, A Benign Eyelid Tumour- The Sagamu Experience

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SUMMARY

Aim: *To study the demographic characteristics, pattern of presentation and type of treatment of chalazion in Sagamu, Nigeria.*

Materials and Methods: *A retrospective hospital-based study was conducted to review all the cases seen and diagnosed as chalazion in the eye clinic of Olabisi Onabanjo University Teaching Hospital [OOUTH], Sagamu between January 1997 and December 2007. Data was obtained from the clinic attendance register, the register of minor office procedure and the case files. The age, sex, pattern of presentation and type of treatment given were recorded.*

Result: *Ninety-seven cases (0.7%) out of a total of 13,605 new cases seen during the period under review were diagnosed as chalazion although 59 case records were available for review. There were 46 males and 51 females with a mean age of 25.3 years. Thirty-nine cases (40.2%) were between the ages of 21 and 30 years. Twenty-one cases (42.9%) presented with multiple chalazia while 32 cases (65.3%) had chalazion only in their upper eyelids. Forty-four cases (74.6%) were treated with incision and curettage.*

Conclusion: *Chalazion is not a common ocular problem. Young age at presentation and multiple lesions are significant findings. Surgery is the standard method of treatment.*

Key words: chalazion, benign eyelid tumour, Sagamu

INTRODUCTION

A chalazion is a small, localized, firm, benign, painless and slow growing mass in the eyelid. It is a chronic lipogranuloma caused by blockage of the meibomian or zeis glands by lipid breakdown products from trapped or retained sebaceous secretions. The word chalazion (plural chalazia), in Greek, means a small lump. It is also known as hailstone, meaning pimples.[1] There is no known sex prevalence or incidence.[1, 2, 3] Apart from causing a cosmetic blemish, a chalazion also causes visual impairment from a large upper eyelid lesion, distorting or flattening the central cornea, consequently inducing, as a rule astigmatism or hypermetropia,[4, 5] especially in those with reduced scleral rigidity. Dense amblyopia and secondary exotropia have been reported in a thirteen-month-old with chalazion.[6]

Seborrhoeic dermatitis, acne rosacea and chronic blepharitis are factors that predispose to chalazion development. Chalazion has also been associated with meibomian gland dysfunction,[7] hyperlipidaemia, immunodeficiency and hyperimmunoglobulin E syndrome (hyper lgE syndrome/Job syndrome).[1, 8] Some viruses and bacteria have been implicated in the aetiology of chalazion.[1,3] Exposure to ultraviolet light, dry eye, poor lid hygiene, use of eyelid cosmetic products and stress are the major causes of chalazion but their role and the mechanism by which the disease is produced is unknown.

The diagnosis of chalazion is mainly clinical, but fine needle aspiration cytology in atypical or recurrent cases provides a rapid, safe and reliable means of excluding other causes of eyelid swelling, including malignancies.[9] However, neurilemoma of the eyelid,[10] plexiform neurofibromatosis, metastatic lesion to the eyelid from a pleural mesothelioma,[11] adenoid cystic carcinoma,[12] sebaceous/meibomian gland carcinoma and squamous cell carcinoma have all been misdiagnosed as chalazion.

Although chalazion is one of the common eyelid problems diagnosed by general ophthalmologists, data that could provide information for researchers and clinicians on this subject in this environment are scarce. To the best of our knowledge, no study on chalazion has been conducted in our centre. This study is hereby conducted to review chalazion in our environment and heighten public awareness of this benign external eye disease.

MATERIAL AND METHODS

A retrospective analysis of all the cases of chalazion diagnosed and treated at the Olabisi Onabanjo University Teaching Hospital, Sagamu, Ogun State, Nigeria between January 1997 and December 2007 was done. Information was obtained from the eye clinic attendance register, minor surgery register and patients' case files.

The demographic characteristics, pattern of presentation and treatment were documented. The result was analysed using SPSS.

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RESULTS

A total of 97 cases of chalazion were seen between January 1997 and December 2007 out of 13,605 new cases seen during the study period; giving a prevalence of 0.7%. Only 59 case notes (60.8%) were available for review. Forty-six were male while 51 were female, with a male to female ratio of 1:1.1. The age range was from 2 to 59 years, with a mean of 25.3 years and (standard deviation) SD ± 10.5 years. Thirty-nine (40.2%) of the patients with chalazion were aged between 21 and 30 years, while 27 (27.8%) were between 11 and 20 years. Table 1 reveals the frequency of chalazion in different age categories.

Table 1. Frequency of chalazion in different age categories

Age category	Frequency	%
Valid 10 and <	4	4.1
11 - 20	27	27.8
21 - 30	39	40.2
31 - 40	13	13.4
41 - 50	10	10.3
51 and >	1	1
Missing	3	3.1
Total	**97**	**100.0**

Thirty-two cases (65.3%) of chalazion occurred on the upper eyelid, 19 occurred on the lower eyelid, and the upper and lower eyelids were affected in 8 cases. Twenty-one (42.9%) had multiple chalazia, while 27 (57.1%) were solitary. The record of 11 cases did not specify the number of chalazion. Sixteen of those with multiple chalazia (76.2%) were below thirty years. Figures 1 and 2 show the right, left, upper and lower eyelids of a 27-year-old patient with multiple chalazia (between five and six lumps on each eyelid).

The treatment given was either conservative or surgical. Conservative treatment was given using warm compresses, massage and application of chloramphenicol eye ointment, while surgery was by incision and curettage, with the application of chloramphenicol eye ointment for one or two weeks. Forty-four patients (74.6%) were treated with surgery, 9 were conservative, 1 had both and 5 received no treatment. There was only one case of recurrence although the patients were under observation for a very short period; the longest being three weeks after treatment. All the patients were eventually lost to follow up.

Figure 1. Multiple chalazia in the right eyelids.

Figure 2. Multiple chalazia in the left eyelids

DISCUSSION

Chalazion is one of the most common eyelid swellings encountered in general ophthalmology, but the exact incidence and prevalence both locally and internationally is not known.[1] From this study, the prevalence of chalazion is 0.7%, showing that it is not really a common problem in our eye clinic. This may be because the study is hospital-based and many people suffering from chalazion have no access to eye care facilities. Another reason could be the nonchalant attitude of people to a benign lesion even with its cosmetic implication. Only the case notes of 60.8% of the patients could be retrieved, because, prior to 2007, outpatient records were written on the patients' cards before case files were opened; there was no adequate record of patients who defaulted from the clinic early; thus explains the case file retrieval rate recorded in this study.

Chalazion occurs across all ages,[1, 2] it may cluster at puberty but it is less prevalent among the elderly. Similar to

the reports of other studies, a relatively young population was affected (2-59 years) with a mean of 25.3 years, almost two-thirds (68.0%) occurred between 11 and 30 years.[1,2,4] The male to female ratio was 1:1.1, as found in previous studies.[1,2,3]

Chalazion occurs more often on the upper eyelid than the lower one for anatomical reasons. Meibomian glands chalazia are usually deep while those involving the glands of zeis are either superficial or marginal.

There have been some case reports of solitary eyelid chalazion involving the entire eyelid and mimicking eyelid neoplasia,[13, 14, 15] but the occurrence of multiple chalazia of this magnitude in young individuals as found in this study is an unusual finding. This may be due to hormonal influences on sebaceous secretion and viscosity during this period.[1] There has been a report of the spread of chalazion among close relatives in homes, schools etc, especially in those with follicular conjunctivitis and preauricular lymphadenopathy or following an episode of systemic or localized viral infections suggesting a viral aetiology in chalazion which was confirmed histologically.[3] Bacteria, especially staphylococcus aureus, is the primary cause of chalazion, although most morbidity in chalazion is due to secondary bacteria-superimposed infection.[1, 3]

The choice of treatment of chalazion is usually based on clinical experience as was observed in this study, but it is important to note that the cytopathologic appearance of the chalazion granuloma, whether it is a mixed cell or a suppurating type,[4, 9] may also determine the choice of treatment. [4, 16]

Chalazion can be treated conservatively using an intralesional injection of long-acting corticosteroid,[17, 18, 19] surgery in the form of incision and curettage[13] or subconjunctival total excision[20] of the chalazion or a combination of surgery with intralesional injection.[4, 16] In our centre, incision and curettage are the standard methods of treatment and these were administered in 74.6% of the cases.

The effectiveness of the treatment could not be ascertained because the patients were lost to follow up within a short time. We may infer that the patients were either better and probably felt that coming back for follow up was not necessary, or that they decided to seek further treatment elsewhere as is often the case with many patients.

Further research should be carried out on the predisposing factors, the common type of granuloma, and the best and most effective method of treating chalazion in our environment.

CONCLUSION

Chalazion, though one of the common eyelid swellings seen by the general ophthalmologist, is not a common problem in our centre. It is more prevalent in adolescents and young adults and multiple lesions are significant findings. Incision and curettage still remain the common methods of treatment.

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