raised intracranial tension is also invoked to explain the digital impressions, best seen in the thinned bones of the vault of the skull in *x*-ray films.

Oxycephaly usually manifests itself at birth but it may be delayed till the second year of life. Rarely, it may occur as late as the sixth year. In about 10 per cent of cases, the condition has been found to be hereditary or familial. The case which we describe below has a well marked familial character.

Nothing is known regarding the ætiology of the disease and no relationship exists between this and the other commoner diseases which may produce bony deformities such as rickets, syphilis and tuberculosis. It has been suggested that some as yet unknown developmental anomaly may be responsible for it. The hereditary and familial incidence in a certain number of cases and the presence of congenital malformations in others are considered as strong presumptive evidence in support of such a hypothesis.

Oxycephalic children are not necessarily mental cretins, the majority of them showing a fairly normal mental development and functions. A small proportion of these patients may, however, show a state of imbecility. More commonly, they complain of a progressively increasing headache and ultimate loss of vision. The changes in the eyes are very remarkable. In a typical case, one finds exophthalmos, hypertelorism (eyes set far apart), divergent squint, papillœdema and optic atrophy. Exophthalmos, as already mentioned, is due to shallowness of the orbit brought about by the raised intracranial pressure, but the optic atrophy may result primarily from pressure effects due to narrowing of the optic canal or from twisting of the optic nerves due to the development of a deformity of the middle and anterior fossæ of the cranium. It may also follow papillœdema due to heightened intracranial tension.

Oxycephalic children with well marked and characteristic deformity may attain adult age without impairment or loss of vision and without any mental deterioration. Such persons no longer complain of headache. The skulls of such persons are, to all intents and purposes, normal looking, with almost complete disappearance of the digital impressions which form such a characteristic radiological picture. The sella turcica, however, remains very big and widened.

Case report.—N., a male child, aged 1½ years. Admitted into the Medical College Hospital for loss of vision and a prominence in front of the head.

Family history.—The mother has a similar projection in front of her head with protrusion of the eyeballs. Her vision and mental condition are perfectly normal. This deformity in her skull was first noticed by her parents when she was about 2 years old. No such deformity was present in any one of her brothers, sisters or parents. She was married when she was 11 years of age and had her first child 9 years after the marriage. The first issue was a male child who is still alive. He is now 8 years old and possesses all the features of an oxycephalic though to a lesser degree. The frontal protuberance is slight, with moderate

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TREATMENT OF ORIENTAL SORE WITH QUINACRINE

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ORIENTAL sore is comparatively frequent in the Punjab and quite a large number of patients attending the surgical out-patients of the Mayo Hospital, Lahore, come for the treatment of this disease. These cases have been treated so far with different forms of treatment, such as the application of carbon-dioxide snow, local infiltration with berberine sulphate and hypodermic injections of the protozoal vaccine named 'Leishmin', with varying results which have been reported earlier by Warma (1931).

In 1938 Flarer in Sicily reported good results in fourteen cases with local infiltration of atebrin.

As atebrin was not available, treatment of these local sores was undertaken with quinacrine (M.&B. product) in the surgical out-patients, last year. The first case to receive this treatment was a young boy of 12 years who had a reddish papule at the root of the nose. The examination of the scrapings from this papule showed *Leishmania tropica*. Local intradermal infiltration with 0.1 gm. quinacrine dissolved in 1.5 c.cm. of sterile distilled water was made into and around the sore. The slight œdema which followed persisted for about twenty-four hours but without a trace of inflammatory reaction and without any noticeable pain. The sore retrogressed rapidly and when scrapings were again examined after a week, no *L. tropica* could be identified. The cure was brought about in a fortnight with a single injection. The patient on request visited the hospital on several occasions after the sore had completely healed, but it did not show any recurrence.

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exophthalmos, but the vision is normal. His mental condition is normal. The mother noticed these changes when the child was 2½ years old. About a year later another male child was born. He also showed all the features of an oxycephalic from the second year but he died at the age of 6 years of some gastro-intestinal infection. Two more children, both males, were born in succession, but they both died at a very early age before any deformity could be manifested. The fifth child who was born 18 months ago is also a male child. He has a frontal protuberance which has been noticed from his birth. Since the age of 6 months this projection has become very prominent and now he presents the picture of fully developed oxycephaly with marked exophthalmos. There is complete bilateral primary optic atrophy. The mental condition of the child is quite normal and he is fairly intelligent.

Acknowledgment

We are grateful to Colonel H. E. Murray, I.M.S., Superintendent, Medical College Hospital, for his permission to publish the case records and to Dr. K. B. Ghose, professor of radiology, for the *x*-ray pictures.

Encouraged by this result, treatment was undertaken in many more patients, with satisfactory results. To start with, this treatment was undertaken only in patients with one or two sores which were not very extensive, but later all types of cases were given this treatment; unfortunately this treatment had to be given up as the drug was no longer available.

In this investigation Warma's classification has been adopted, which is as follows :—

Type I—Where there is only a papule covered with reddish brown scales.

Type II—Where there is a raised area of inflamed tissue covered with scales, the latter cracked at places and exuding serous discharge, the whole surrounded by an area of chronic inflammation, but without actual ulceration.

Type III—Raised ulcerating surface, but not septic, with a hard indurated red periphery.

Type IV—Septic ulcer discharging pus, having an extensive raised base and a hard indurated circumference.

So far fifty-seven cases have been treated by this method. Before starting the treatment, *L. tropica* was identified from the scrapings in all cases except two.

In one case in which the scrapings were not examined, instead of any improvement occurring, the condition became worse and ultimately the case was diagnosed as one of seborrhœic dermatitis. Of the remaining 56 cases, only 48 could be followed. These 48 cases had 107 sores on their bodies, and the table given below shows the type of sore and the number of sores of each type which were cured by injections ranging from one to five in number.

Type of sore	Number of injections needed to effect a cure				
	1	2	3	4	5
I	14	20	26	..	..
II	2	9	6	4	..
III	..	..	16	6	4

Sores of types I, II and III were given the injections straightway, while sores of type IV were first treated with hot boric compresses and antiseptic dressings to reduce sepsis and thus converted into type III and then treated with the injections.

Technique of injections

The solution is prepared by dissolving quinacrine from ampoules in sterilized distilled water. One c.cm. of the distilled water is enough for 0.1 gm. of the drug, but for a big sore or for a case with multiple sores 0.3 or 0.4 gm. of the drug dissolved in 3 or 4 c.cm. of distilled water has been injected with impunity at one time. The syringe used is a dental syringe with a glass barrel which can inject under considerable

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NOTES ON THE CONTROL OF KALA-AZAR ON TEA ESTATES

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Introduction.—Experience and observations made in two large tea districts in Assam (East Boroi and Mangaldai) from 1926 to 1942 have convinced the writer that the several recommendations detailed below are the most

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pressure and the amount of the solution injected can be seen. Before injection, the area is cleaned with alcohol. The sore is then injected intradermally from the periphery, the whole sore being infiltrated with the solution. Generally a number of punctures are needed to infiltrate the whole sore. The injections are somewhat painful but the patients usually tolerate the pain well.

After-treatment

No special after-treatment is required in these cases. If sores are on the exposed parts like the face, after the injection the part is covered with a collodion dressing, but if the sores are on other parts, simple aseptic dressing can be given. The injections should be repeated after an interval of a week.

Conclusions

Although the number of cases treated is not very large, the series is large enough to enable us to draw important and definite conclusions :—

1. This method of treatment is very useful for sores occurring on face, lips, and other exposed parts, as it leaves no scars if ulceration has not already occurred, and very thin and small scars where ulceration has already occurred.

2. There is no inflammatory reaction after the injection, and pain after the injection is very little.

3. A number of sores can be treated at the same time.

4. This treatment can be carried out in ulcers occurring on eyelids and parts near the eye where other forms of treatment are not possible.

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REFERENCES

FLARER, F. (1938) .. *Presse Méd.*, **46**, 1388. (Abstract—*J. Amer. Med. Assoc.*, **111**, 1803.)

WARMA, J. D. (1931) .. *Indian Med. Gaz.*, **66**, 383.