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HERPES ZOSTER OTICUS.

SIMPLE herpetic eruptions occurring in the course of pneumonia, or one or other of the infectious fevers, not infrequently appear on the auricle, but true herpes zoster of the ear is a decidedly rare condition, if we may judge from the scarcity of recorded cases (fifteen according to Jaehne; thirty according to Ramsay Hunt).

The common herpes zoster[1] of the trunk and limbs is an acute hæmorrhagic inflammation of the posterior root ganglia of the spinal nerves, probably microbic in nature. When the posterior ganglia of the cervical nerves are attacked, the auricle, as well as the neck, may become the seat of herpetic vesicles, in which case the herpes maps out the distribution of the great auricular nerve, as in the case reported recently by Dr. H. J. Davis.[2] Or, and this is the variety we are specially concerned with at the present moment—herpes on the auricle may be due to inflammation of the geniculate ganglion of the facial nerve, which is the root ganglion of the pars intermedia, the sensory constituent of the facial nerve, for the facial is, of course, not a pure motor nerve, and its geniculate ganglion is the analogue of the root ganglia of the posterior or sensory roots of the spinal nerves. It is to this variety that the name "otic herpes zoster" is applicable.

[1] "Zoster" (ζωστήρ, a belt) is strickly speaking a misnomer when applied to herpes of the auricle, but by a process of evolution familiar enough in medical terminology the word has come to be applied to all herpetic rashes due to inflammation of the root ganglia.

[2] "Proceedings Otological Section Royal Society of Medicine" (see p. 314 of this issue).

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The distribution of the herpetic eruption in otic herpes zoster, as Ramsay Hunt has pointed out,[1] has not yet been exactly mapped out, but according to that observer's investigations, the areas liable to attack which correspond to the distribution of the sensory elements of the facial nerve include: the external auditory meatus, the concha, the anti-tragus, the anti-helix, the fossa of the anti-helix, and the lobule, and probably also the postero-mesial aspect of the auricle and the adjacent mastoid region. Further, a herpetic rash on the anterior two thirds of the tongue, corresponding to the chorda tympani, and in the peri-tonsillar region (probably corresponding to the great superficial petrosal nerve through Meckel's ganglion), may also be referred to the geniculate ganglion.

But our interest in geniculate herpes zoster does not end with a knowledge of the distribution and site of the eruption. Experience has shown that the herpetic rash and pains are frequently complicated with other and more serious nerve disturbances. Facial paralysis, for example, is generally present, as a result, doubtless, of the extension of the inflammatory process to the motor fibres of the seventh nerve. And what is of greater importance to us, the disease may attack the ganglia of the cochlear and vestibular nerves with consequent severe nerve-deafness and with vertigo, vomiting and nystagmus followed by a loss of the vestibular reactions in the affected ear. Moreover, although these paralytic phenomena may disappear, cases are on record[2] in which the facial paralysis and the deafness have remained permanent to a greater or lesser extent.

In another class of case the brunt of the disease seems to be borne by the Gasserian ganglion or by the ganglia of the upper cervical nerves, in which event the herpetic rash appears on the face or on the neck. Although in such cases the geniculate ganglion is only attacked *en passant*, so to speak, nevertheless, it is sufficiently affected to lead to facial paralysis.

This association of herpes zoster, primarily a sensory nerve-root affection, with motor paralysis, seems to be more common in geniculate herpes than in herpes zoster of the trunk and limbs—probably because of the close anatomical connection of the geniculate ganglion with the motor fibres of the seventh nerve—but even in the trunk and limbs muscular paralysis is by no means unknown.

Here, then, we have a disease which varies in severity from simple herpes of cutaneous and mucous surfaces up to wide-spread

[1] Journ. of Laryngol., Rhinol., and Ot vol. xxv, p. 405 *et seq.*
[2] A. Jaehne, p. 333 of this issue.

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paralysis of important cranial nerves, always obstinate and sometimes permanent in character.

Finally, a point of great practical importance emerges when we come to consider the symptoms presented by the disease, a point alluded to by Prof. Urban Pritchard, in discussing Dr. H. J. Davis's case already mentioned. This is that the symptoms of otic herpes may closely simulate those of acute suppuration of the middle ear. In Dr. Pritchard's case the normal hearing showed that the auditory nerve had not been implicated, and this led to a correct diagnosis. But it would be easy to construct from the cases which have been recorded an imaginary case by which the otologist would be completely deceived unless his attention had been specially drawn to the possibility of confusion. The very rarity of geniculate herpes adds to the likelihood of such an error occurring.

A patient in the course of a feverish attack (let us call it "influenza") experiences severe deep-seated pain in one ear, which is followed after a few days by discharge from the meatus. In the meantime, deafness comes on and rapidly becomes absolute, along with the familiar and unmistakable signs of acute vestibular disturbance and with the appearance of facial paralysis. Here is all the story together with many of the signs of acute influenzal middle-ear suppuration with facial paralysis and labyrinthitis secondary to it. There are, it is true, a few herpetic spots on the auricle; the discharge from the meatus is serous, and not purulent unless the vesicles have become infected, and the membrana tympani, though reddened, is not bulging and is intact. But if the vesicles have become purulent and the meatus so swollen that the membrane cannot be satisfactorily inspected, and if, as is quite likely, the herpes on the auricle be mistaken for acute eczema, then the most experienced otologist might be forgiven if he made an error in diagnosis.

In such a case, however, a few vesicles on the tongue or palate, if present, would be sufficient to arouse our suspicions of otic herpes, and another point of great importance would be the behaviour of the temperature. In herpes the preliminary burst of fever is soon over, whereas in acute middle-ear suppuration with such severe complications the temperature would remain elevated.

No apology is needed for dwelling upon this aspect of the subject, for to operate upon the middle ear, and perhaps upon the labyrinth, in such a case as this would, of course, expose the patient to serious as well as to unnecessary risk.

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