

cultures. The diazo reaction did not appear till the fourth day, and was very intense from the first reading  $R^2$ . The agglutination rose progressively to 1 per 30 on the third day, 1 per 400 on the fifth day, 1 per 800 on the sixth day, 1 per 1,200 on the seventh day, 1 per 9,000 on the eighth day, and 1 per 12,000 on the tenth day. These cases show that, although in some cases the serum reaction may be retarded, yet it is very often present from the earliest days of typhoid fever.

## CORRESPONDENCE.

### SIR VICTOR HORSLEY.

SIR,—Every member of the Association must feel that some recognition of the splendid services rendered to it by Sir Victor Horsley should be made. I suggest that the annual meeting of the Association should be held in London, and that Sir Victor Horsley should be nominated as President.—I am, etc.,

Cardiff, Jan. 14th.

T. GARRETT HORDER.

### THE EDALJI CASE.

SIR,—Might I ask you in the cause of justice to permit me to put the following question to those of your readers who are engaged in eye practice?

"Do you consider it physically possible for Mr. George Edalji, whose degree of myopic astigmatism as determined by retinoscopy under homatropine is

Right eye — 8.75 diop. spher.  
— 1.75 diop. cylind. axis  $90^\circ$ .  
Left eye — 8.25 diop. spher.

to have set forth without glasses on a pitch dark night with neither moon nor stars; to have crossed country for half a mile, climbing fences, finding gaps in hedges, and passing over a broad railway line; to have found and mutilated a pony which was loose in a large field, to have returned half a mile, and to have accomplished it all under thirty-five minutes, the limit of the possible time at his disposal?"

A consensus of scientific opinion upon this point would greatly aid me in getting justice for this young professional man, condemned for an offence which in my opinion he could not possibly have committed.—I am, etc.,

Hindhead, Surrey, Jan. 13th.

ARTHUR CONAN DOYLE.

### THE BEST WAY TO REMOVE TONSILS.

SIR,—I am in thorough agreement with Mr. Hey Groves as to the value of the operation of digital separation and removal of tonsils as recommended by Celsus, A.D. 10.<sup>1</sup> Borelli later<sup>2</sup> revived it, and it has been frequently practised by surgeons since (and doubtless before), but I must protest against its being described as the best way for all cases and in all circumstances.

Digital separation, enucleation, or avulsion is simple and efficient when the very considerable knack, delicacy, and certainty of touch have been acquired by experience. In unpractised hands the faucial pillars may be over-stretched or torn, or even a hole made in the soft palate leading to a possibly permanent alteration in the quality of the voice and impaired deglutition. Neither is it always easy. Dr. Watson Williams says<sup>3</sup>:

It (enucleation) has been described as an easy proceeding, but I have never found it so, and now never attempt it.

Another serious disadvantage is that in children it absolutely demands a general anaesthetic, the dangers of which in such operations is by no means a theoretical risk. Minor disadvantages are that in my experience there is in children more bleeding and more subsequent soreness after enucleation than after tonsillotomy with the guillotine. If the enlarged tonsil is deeply packed and buried in the deep tissues of the neck, or firmly adherent to the faucial pillars or to the base of tongue, or is so soft and pulpy that it will not enter the ring of the guillotine, or too large and hard to adequately become engaged in the same (previously properly selected as to size), the above disadvantages should not be allowed to

weigh, and enucleation should be performed, being necessary for efficiency. There is no doubt, however, in my mind, after twenty years' charge of and work in the Throat Department of St. Mary's Hospital, that for the majority of cases in young children with tonsils enlarged and projecting well into the throat, well-defined and limited attachment between the faucial pillars, and no abnormal adhesions, ordinary tonsillotomy with the guillotine is the method of election. I base my opinion on the fact of its being quite efficient in appropriate cases, and not necessitating the risks of general anaesthesia. With a little tact on the part of the surgeon, any tendency to alarm on the part of the child is usually allayed without difficulty, and the little patient being properly nursed and his head steadied by assistants, his eyes shut, and his mouth wide open, both tonsils will often be found in the sawdust pail within five seconds. The patient hardly suffers at all, the bleeding stops in a few minutes, and the patient can walk out of the room. If the child has been frightened by indiscreet relatives, or previously hurt by examinations or paintings, or if naturally unruly, or if adenoids are also present, general anaesthesia (involving previous preparation) will be needed, and enucleation will be more to be considered; but, even so, I should prefer tonsillotomy if properly done.

I have every sympathy with Mr. Hey Groves in the unpleasant sequels of his subjective experience of tonsillotomy by the guillotine. Quite apart from the fact that guillotine operations in adults are to be less urged than in children, on account of the often greatly-increased haemorrhage, it appears that in Mr. Hey Groves's own cases the surgeon either misjudged the suitability of the case for that operation, or failed to carry out what he desired. For removing tonsils in adults, I consider enucleation a better operation as a rule than tonsillotomy, chiefly because of lessened risks of haemorrhage, even when the guillotine would be efficient. But the former demands a general anaesthetic, a risk not to be despised or ignored in any bleeding operation in the throat. Personal considerations, convenience, and these risks have to be balanced against each other.

But in the adult, and more especially in the case of the professional voice user, who requires removal of enlarged or diseased or adherent tonsils on account of recurrent inflammations, or retention of septic secretion, there is the much better method of the cold steel wire écraseur, the recent paper on which at Toronto has elicited Mr. Hey Groves's criticism. It can do no harm to adjacent structures; it removes completely the diseased part. The loss of blood often does not exceed a teaspoonful; it can be performed in the sitting posture, in full illumination, and it can be done under cocaine anaesthesia. The disadvantages are small relatively. Owing to the slow tightening of the wire noose necessary to prevent bleeding, the patient's discomfort is prolonged, though without any real pain. Some amount of practice is needed to detach and draw out the affected part from its bed, and adjust the wire noose at its base.

The method has been in common use in suitable cases ever since I have been in practice, and has given excellent results; but I must confess that since two years ago, when Dr. Fletcher Ingalls of Chicago devised a hook for liberating the tonsil from its adherent structures, and his special tonsil clamp for grasping and holding secure the whole of the tonsil and helping the passage and retention of the wire noose to the attached base, the whole procedure has been immensely facilitated. The clamp to draw out and secure the tonsil properly has always been the great difficulty, for that function was imperfectly fulfilled by hawkbill vulsella, or by fenestrated tongue, sponge, or ovum forceps, and to that extent justifies Mr. Hey Groves's criticism. I think if he and other surgeons will try Fletcher Ingalls's hook and clamp, they will soon have as high an opinion of the snaring operation as I have. Meyer and Meltzer procured mine from Chicago, but are prepared to supply similar ones of the same pattern of their own manufacture.

I acknowledge that in the hands of the expert the chance of doing any harm by enucleation is small, but on the whole I should recommend in preference the snare for operations in adults, and still more strongly so in the case of professional voice users. The galvano-caustic snare, in my experience, has no advantage over the cold wire, and leads to very much greater throat pain after.

<sup>1</sup> *De Medicina*, Cap. vii, Section 42.

<sup>2</sup> *Gaz. Med. Ital. Prov. Sard.*, December 30th, 1861.

<sup>3</sup> *Diseases of the Upper Respiratory Tract*, p. 104, Fourth Edition, Bristol, 1901.

In the literature of the subject one finds the use of the bistoury and vulsellum have been followed so many times by the opening of the internal carotid artery—and I have personal information of more than one fatal result—and that when least expected, that I mention it rather by way of warning and caution than as a method of everyday use. It should rarely be adopted.—I am, etc.,

ROBERT HY. SCANES SPICER, M.D.Lond.

London, W., Dec. 31st, 1906.

SIR,—I was not surprised to read Mr. Mayo Collier's somewhat contemptuous dismissal of the idea of enucleating tonsils as being superior to their removal by the guillotine. But I must say that it is rather astonishing if he and those who advocate the guillotine have so strong a case that they find it necessary to resort to such irrelevant and inaccurate statements for its support.

The arrangement of Peyer's patches and their relation to enteric or tuberculous disease may be a subject in which we need enlightenment, but what has it to do with the best way of removing tonsils? He speaks of the removal of diseased tonsils as "killing the cow to cure it," his solicitude evidently being rather for the tonsils than for the patient. If he had deprecated killing the goose that laid the golden egg, then his argument would have been clear. It is admitted that the guillotine only removes those parts of the tonsils which are internal to the pillars of the fauces, but without the shade of justification it is stated that these superficial portions contain the greater part of the lymphatic tissue of the tonsil. May I ask of what does the deep part of the tonsil consist? Then it is stated that the recesses of the tonsil are arranged for the most part on the pharyngeal aspect of this body. For the most part it may be, but what about the crypts which open into the supratonsillar fossa? How can these be removed by the guillotine?

Whatever the function of the normal pharyngeal tonsils may be—and it is a matter of conjecture—surely no one believes that diseased tonsils are of any benefit to the individual. If the normal tonsil is a filter to catch infective germs, then the diseased tonsil is a foul filter whose function is perverted into that of a disseminator of poison. In exactly the same way we may argue as to the possible function of the great intestinal tonsil—that is, the appendix; but when it is diseased, and its tissues teeming with micro-organisms, then the only proper treatment is one which removes the whole appendix, and when a stump of the appendix was left in order to fulfil certain textbook requirements about "turning back a peritoneal cuff," etc., then in a certain proportion of cases relapses occurred, and the patient had to submit to a second illness and operation.

Lastly, we are (solemnly) told that "the tonsil is a barrier between the cavity of the mouth and the internal carotid artery," and that "the fossa for the tonsil is separated only by the thinnest tissues from the actual coats of the artery." (This is pretty good for one who professes to clear away "misconceptions about the nature and anatomy of the tonsils.") As a matter of fact, the internal carotid artery is 1.5 cm., or  $\frac{3}{4}$  in., from the outer surface of the tonsil. The two structures are separated by the superior constrictor muscle, the pharyngeal aponeurosis, and a considerable quantity of loose areolar tissue. It would be practically impossible to reach the internal carotid artery from the tonsillar bed with the unaided finger. As to the "stump of fibrous tissue left by the guillotine serving as a protector and shield to the carotid artery," this is, of course, the reason why people can swallow swords without cutting their carotid arteries; whereas, if their tonsils had been enucleated, they would inevitably bleed to death if they were to perform this feat! An answer to all pleas for the retention of the tonsil is the incontrovertible fact that in normal adults the tonsils atrophy; so that to enucleate diseased tonsils from an adult is only to produce in them the normal condition.

It seems to me that anatomy, pathology, and every sound surgical principle teach us:

1. That if a diseased tonsil requires removal it should be thoroughly removed, and not merely cut into two pieces.
2. The easiest way of effecting this is by enucleating the tonsil by the finger.
3. Many cases occur in which tonsillar enlargement is

superficial to the pillars of the fauces, and these are the only cases in which the guillotine should be used.

4. When a large portion of a diseased tonsil is left between the pillars of the fauces after the guillotine, this in many cases causes a relapsing tonsillitis, and the condition of the patient is worse than if they had never been touched.—I am, etc.

ERNEST W. HEY GROVES, M.S., F.R.C.S.,

Assistant Surgeon to the Bristol General Hospital;

Demonstrator of Anatomy at the Bristol Medical School.

January 6th.

#### THE INFLUENCE OF RAINY WINDS ON PHTHISIS.

SIR,—Dr. Gordon challenges the statement made by me in the BRITISH MEDICAL JOURNAL of December 29th, 1906:

Dr. Gordon condemned the Devon and Cornwall Sanatorium, South Brent, to the Devon County Council, who were asked to subscribe, because it had a south-westerly exposure, although sheltered by high surrounding hills, and therefore under the influence of his rainy-wind theory. As far as I remember, he told one of the sanatorium officials that if the sanatorium was on the other side of the valley, which would give it a north and east exposure, he might support the place.

Dr. Gordon says that my information is incorrect. Allow me to inform him that I took good care to assure myself of its truthfulness before making the statement. Moreover my connexion with the sanatorium in question as medical superintendent showed me very clearly that his condemnation of it was unreasonable, unmerited, and quite wrong. Why Dr. Gordon should refuse to discuss the practical application of his theory, which he made with regard to the above sanatorium, I can only guess. This is not a side question, and, as far as I am concerned, Dr. Gordon's "rainy-wind theory" can die the natural death which awaits it, but when such a theory is applied without reason to a sanatorium for the working class—which was at the time struggling for its very existence and has since been able to prove its value—with the result that a public body like the Devon County Council, having Dr. Gordon's report before them, are apparently influenced by it and do not subscribe, then surely it is high time that a protest should be raised.

There is one other matter I should like to mention. Dr. Gordon says that Dr. Pearce's figures are wrong. They are only wrong in so far that they disprove Dr. Gordon's theory. Also Dr. Gordon's reference to the village of Meavy shows that he has no knowledge of the locality.

I have no intention of continuing this discussion. I can only hope that my protest and contradiction of Dr. Gordon's theory may bear fruit, and that some one who is as capable as figures as Dr. Gordon may investigate the south-western border of Dartmoor, the district most exposed to Dr. Gordon's "rainy-wind theory," and the results they obtain may even convince Dr. Gordon that there are two sides to every question.—I am, etc.,

Yelverton, Jan. 15th.

J. PENN MILTON.

SIR,—Dr. J. Penn Milton writes with ripe experience on the relationship, if any, of wet winds to phthisis, as exemplified in Devonshire. Apart from the special evidence afforded by well-conducted sanatoriums that open air from any quarter is an active factor in the healing of tuberculous foci, especially those situated in the lungs, there are general grounds for believing that an elementary force, such as the wind, cannot favour the tuberculous process. Thus, if wet winds played such a malignant part in Nature, their effect—so constant and acting over countless ages—would have been found *universally* highly destructive to consumptives exposed to them.

One would also certainly expect to find a very much higher mortality from phthisis in those living on islands and coasts, where moist winds prevail, than in those Continental countries not so exposed. Indeed, as Dr. Penn Milton says, it is lack of air rather than exposure to air which the bulk of evidence clearly condemns as raising the death-rate in phthisis.

In any case, it is to be deprecated that this theory of the influence of wet winds on phthisis—which has, to say the least, not yet been accepted by the medical profession as a body—should have been, to my knowledge, definitely placed several years ago before a body of laymen—namely, the Devon County Council—as condemning a public sanatorium on Dartmoor. It is rather in the pages of medical journals that discussions which bear directly on such institutions should have been and still be recorded.