SERIOUS INJURY TO AN EYE FROM A BURSTING GOLF BALL.

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In the *Lancet* of July 18th, 1914, Mr. W. H. Jessop published the notes of a severe eye injury inflicted by the contents of a golf ball which the patient was engaged in cutting open with a knife. The core of the ball burst with explosive violence, ejecting the semifluid contents with such force as to strike the ceiling of a room 10 ft. high; some of the caustic core fluid struck the patient's eye, with disastrous results. Although, as will shortly be shown, such accidents have been far too common in America, we can only find this one record, in any English ophthalmic journal, of a case of the kind. The following notes of a similar accident are published in the hope of again attracting the attention of the medical profession, and through it that of the public at large, to a very grave danger to the eyes of people of an inquiring turn of mind, and especially of children.

W. S., aged 7 years, was watching a grown-up friend, who was using a knife to open the core of a golf ball, which had been picked up on a course. The ball had lost its outer cover and the make of it was not known. The child was sitting on the opposite side of the table at the time, when the core suddenly burst, throwing some very irritating fluid into his right eye. He was at once taken to a medical man, who without delay washed the conjunctival sac well out under a general anæsthetic. A few days later the patient came under the care of one of us (W. I.) in Southsea. From his notes of the case the following abstract is made:

The accident happened on August 12th, 1914. When first seen the whole cornea, with the exception of a small area upwards and inwards, was opaque but smooth, and looked like ground glass, only whiter; the lower half of the globe presented a dead white necrotic area, the inner surface of the lower lid and much of the upper lid being in the same condition. The skin of the lids was scarcely affected. For a long time the condition of the eye was regarded as hopeless, as the sclerotic threatened to perforate. The destruction of tissues was too great to permit of the prevention of adhesions; indeed, the adhesion of the lid alone saved the globe from collapsing. For a time there was much contraction of the lower lid, producing an entropion, which, however, disappeared as the granulation tissue grew up.

The child's guardians left Southsea, and the case came under the care of the other of us (R. H. E.) in London, on December 2nd, that is, nearly nineteen weeks after the accident. There was firm and extensive symblepharon of the lower lid, and a limited symblepharon of a frenal nature above. The cornea was opaque over its whole extent, though the opacity thinned off in the upper outer segment; large vessels invaded the cornea from the limbus; the surface of the cornea was rough; the anterior chamber was deep; the iris could be dimly seen, and appeared to be discoloured and degenerate, the pupil being displaced downwards and inwards. The lid was separated from the bulb, and a flap of skin taken from the inner side of the arm was sutured in position. The surgical aspect of the case is, however, of relatively little importance compared with its sociological interest, and may therefore be dismissed without further notice.

Injuries to the eye from contact with the contents of the so-called "water-core" golf balls are becoming so frequent as to constitute a serious menace. Cases have been reported by the following American surgeons:

Casey Wood (*Ophth. Record*, 1912, p. 520).
Lowell, who has reported six cases (*Journ. Amer. Med. Assoc.*, v. 61, p. 2302).
Crigler (*Journ. Amer. Med. Assoc.*, v. 60, p. 1297).
Thomason (*Journ. Amer. Med. Assoc.*, September 20th, p. 965).
Suker, Carroll, Nance, and Adams (*Ann. of Ophth.*, vol. xxiii, pp. 203-4).

In addition, Casey Wood mentions cases of this accident which have happened in the practice of Dr. Guildford of Chicago, Dr. Phillips of Milwaukee, Dr. Jorgenson of Kenosha, and others.

The cause of the accidents has been well put by Casey Wood in the following words: "The cores of golf balls . . . are surrounded by machine-wound indiarubber ribbons, and are thereby subjected to great pressure. It follows that when burst or cut open any fluid they contain is expelled, sometimes with explosive force and noise, to a considerable distance." The contents of the water-core balls seem to vary considerably. The liquid first used would appear to have been water; but this was discarded in favour of heavier fluids. An analysis made for Lowell

showed a ball's contents to consist of a mixture of barium sulphate, soap, and a free alkali. Crigler's examination showed a similar paste, with 2.4 per cent. of sodium hydroxide. Suker and Carroll found dilute sulphuric acid. Wilder found a paste of chloride of zinc and soap. Another report affirms the contents of the core to have been a mixture of chloride of lime and soap, and yet another names a solution of chloride of zinc as the filling of the core. In Jessop's case the ball was a "zone zodiac." The patient stripped it nearly to the core and then cut into it, when it burst so violently as to shoot its contents on to the ceiling of a 10-ft. high room; the fluid core consisted of a semifluid mass of soft soap or potash soap, which was very strongly alkaline, and was contained in a small rubber sac, tied round the neck with string. It is of interest to record that in our case the child was about a yard away from the ball when it burst.

It is important to note that the accidents reported have all been due to the balls being cut open and not to their bursting during play, and that the great majority of the records have come from America. It is possible that the latter fact is to be attributed to the makes of balls used, but possibly also the national American characteristic of a desire to "find out" things may be partially responsible. It would, however, be a mistake to suppose that such accidents of a grave nature are rare in Great Britain. We have both of us heard of such happenings, and we publish this case in the hope that other surgeons will publish cases of the same kind, and thereby help to awaken the public to the extent of the danger involved.

Dr. Gravely of Fletching, Sussex, has communicated to one of us (W. I.) the notes of a case which came under his care within two hours of the accident, and yet sight has been reduced to a doubtful appreciation of a glimmer of light. The contents of the ball are reported to have been a strongly alkaline powder, some of which was found on the boy's handkerchief. It seems possible, however, that they had dried to this consistency, and that they were originally of the soft-soap variety. Both of us have heard reports of other cases of which we have not been able to obtain details.

Whilst the child whose case is recorded above was in the London nursing home, another patient, a young lady, used to visit him, and, being interested in his history, she volunteered the statement that her brother was "in the habit of cutting open golf balls to see their contents," and that he found certain makes contained a thick fluid paste in the core. He had escaped injury, and this was clearly due to the fact that he always unwound all the outer ribbon of elastic before opening the bag. The parents were warned to stop the practice. The girl's evidence, together with the child's history, would appear to show that not a few people in this country are smitten with a similar dangerous curiosity. From what we have heard we are convinced that this is the case.

A review of the recorded cases shows the following points of interest:

1. The damage done is of a very serious nature; thus of the four cases reported on at length by Lowell three lost the use of one eye; Crigler's case only retained the power of counting fingers at one foot; the final vision in Thomason's case was $\frac{3}{80}$, in Jessop's only $\frac{6}{80}$, and in Gravely's case perception of light, and even that doubtful. In the present case it is limited to the power to distinguish hand movements only.

2. The seriousness of the loss is more fully appreciated when we take into account that a large percentage of the cases are in children or young people.

3. In at least two of the recorded cases the victim of the eye injury was not the person who was opening the ball, but an unfortunate child who was looking on.

The practical point is what should now be done to stop what is obviously a grave, yet preventable, danger. Casey Wood, who is a keen golfer as well as a distinguished ophthalmologist, has pointed out that "air and solid core balls, such as those made by the Spalding brothers, are quite as effective and enjoy even a greater measure of popularity than the dangerous fluid core balls. A bill has been introduced into the Legislature of Massachusetts to prohibit the sale of the dangerous forms of golf ball. The United States Golf Association has issued a warning against the dangerous practice of cutting open golf balls. More recently (January, 1914) it has been suggested by

Dr. Wilder, of Chicago, that an announcement should be made through the Council on Health and Public Instruction of the American Medical Association. There is one thing that all medical men can do, and that is, to warn people widely and continuously of the dangers of cutting into golf balls. If more cases are reported—and we believe that not a few have really occurred—of serious damage to eyesight from this cause, it will be a question whether more vigorous action should not be taken by the profession.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ANTISEPTIC PASTES.

THE fact that Sir W. Watson Cheyne, in his Hunterian Oration, advocated the treatment of wounds in war by means of antiseptic pastes of lanoline and white wax, induces me to mention that in 1898, when on an ethnographical expedition in New Guinea, I devised a somewhat similar method based upon the same idea.

The treatment was confined practically to suppurating lesions, including granulomata which had broken down, and some of which were complicated with sinuses leading to the subjacent bone.

My attempts were made with vaseline containing creosote (20 minims to the ounce) and mercury nitrate. But as this mixture became inconveniently fluid after its application, I afterwards added cocoa butter, so as to produce a stiffer composition.

This was applied to the lesions (1) without any special preparation of their surfaces, and (2) after the latter had been cleaned up with an aqueous antiseptic solution. The results, however, were disappointing.

Even when a cavity was completely filled with the preparation suppuration proceeded in its deeper parts; and except for minor superficial lesions the treatment was, in fact, deleterious rather than otherwise. My experience was that such materials, when applied to a surface already infected, acted as an impermeable barrier to the escape of fluid, and so led to an aggravation of the condition. I had no experience with recently inflicted wounds, which, for obvious reasons, offer a much more promising field.

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CUPPING AMONGST THE NATIVES OF NORTHERN NIGERIA.

THE accompanying photograph shows a native being cupped at Abinsi, Northern Provinces of Nigeria. The

native barber makes six small incisions, places the horn over them, sucks the air out, and dabs a piece of wet clay on the end. In the picture three lumps can be seen where the cups have been removed after bleeding. I have often seen carriers on the march have painful swellings in the muscles of the

back or legs cupped, and go on again with a 60 lb. load for many miles quite free from pain.

LESLIE DOUDNEY, M.R.C.S., L.R.C.P.Lond.

Offa, Northern Nigeria.

PROFESSOR S. KITASATO, organizer of the Imperial Japanese Institute for the Study of Infectious Diseases, of which he has been the head since 1892, has resigned that post and organized a new institute of his own. All his former associates and colleagues, including Dr. K. Shiga, discoverer of the bacillus of dysentery, and Dr. S. Hata, whose name is associated with that of Professor Ehrlich in the invention of salvarsan, have joined the new institute.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

At a meeting on Friday, January 29th, the President, Dr. F. CONWAY DWYER, in the chair, Mr. M. R. J. HAYES exhibited a case of *Recurrent cancer of the cervical glands treated by radium* in a man aged 45. The tongue had been partially removed two and a half years previously. X-ray treatment did not seem satisfactory. Radium emanation needles were inserted about the middle of December, when the patient had a swelling on the side of the neck about the size of a goose's egg. The growth was soft about the centre, and appeared to be breaking down. Three needles were inserted from above downwards and three from below upwards. They were left in for twenty-four hours, when they were reinserted at right angles to the former positions. They were again inserted in a position which might have escaped radiation in the previous two insertions. There was no general reaction, but there was a slight local reaction. The man was again seen after Christmas, when the tumour was only half its original size. Another insertion was made on January 13th, but could only be tolerated for a few hours. The condition had shown vast improvement. The primary growth was in the tongue, and the submaxillary gland was at no time involved. The size of the swelling now to be seen was only one-third of the original. Mr. R. C. B. MAUNSELL showed a case of *Cancer of the tongue treated by radium emanations* in a man, aged 61, apparently inoperable. The patient first noticed a lump under the tongue to the left of the fraenum in April, 1913; it ulcerated rapidly and spread. When first seen the man looked cachectic. He suffered considerable pain, and glands were to be felt underneath the jaw on the left side, but none on the right. A piece of the growth removed was reported to be a rapidly-growing carcinoma. The patient was given a mouth wash. Radium was inserted on December 2nd. By the time the insertion was made the radium was reduced to 23 millicuries divided into six needles. The only reaction noticed was a rise in temperature to 100° F., but no increase of pulse. Within a few hours of the insertion the pain was relieved. The needles were left in for twenty-three and a half hours, and next day they were inserted into the submaxillary gland, and the following day the whole lot were reinserted in the mouth. On December 24th the cancerous ulcer was completely covered with epithelium. The teeth were then extracted, and again 24 millicuries of radium were inserted, and after this the patient went home for three weeks. On his return he was in good spirits and greatly improved in general health, but glands were to be felt in the right side of the neck. Since then the neck had been radiated as a prophylactic. When the whole area had healed over a piece of the former cancerous growth taken for examination was found to be covered over with practically normal epithelium, underneath which was a fibrous tissue, and in one part of the section a mass of carcinomatous cells was seen, but there was no mitosis. There were a few giant cells. The point of interest was that although clinically the ulcer had healed over with epithelium there were still carcinomatous cells. Mr. Maunsell showed also a patient suffering from *Primary carcinoma of the neck* under radium treatment. The lump, which was large, had been radiated twice, and was said to have reduced considerably in size. The interesting point in this case was that the patient had a reaction each time, whereas the other patient shown had not. The treatment in this case was being continued. Subcutaneous thickening was noticeable when the needles were removed, but this thickening afterwards disappeared. The paper by Mr. WALTER C. STEVENSON on the *Theory and technique of radium therapy*, of which a report with illustrations is published at p. 498, led to a discussion, in the course of which several speakers related cases treated in the manner described. Professor McWEENEY, who had examined specimens of the growths from Mr. Stevenson's cases, said that four or five of them were typical squamous epitheliomata, and others were squamous sarcoma. There could be no doubt as to their malignancy; he considered that they would have killed the patients speedily. He