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THE SHARKS OF AHWAZ

BY

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EDITORIAL NOTE.—In the summer of 1941 reports of serious injury to individuals amongst troops stationed along the Shatt-el-Arab and creeks in the Basra Base area began to come in to Medical Headquarters.

These reports at first stated that the injuries, gross laceration of legs or arms, were caused by crocodiles (mugger). But our experience was entirely against the injuries being due to crocodile attack. These grip, hold on and gradually drag their victims into the water. The present series of injuries indicated a savage wrenching and avulsing attack by some creature armed with numerous, sharp, inward curving teeth.

Subsequent to the occupation of Ahwaz the information crystallized down to definite attacks by sharks in each case, although at first one could hardly credit sharks being some 90 miles up river from the sea.

About a dozen military cases were recorded with approximately similar histories of attack; this being either when the individual was swimming or actually bathing, or when washing vehicles or equipment at the edge of the water. In the former cases the attacked individuals completely disappeared, in the latter injuries such as are recorded in this article were reported.

One typical case which confirmed the earliest reports was of an I.A.S.C. Driver who had backed his ambulance-car into the shallow water of the rocky rapids at Ahwaz and was standing in the water less than knee deep washing the rear wheel of the vehicle. His right ankle was seized by a shark and he was pulled down off balance. His subsequent injuries, of which he died, were avulsion of the right leg, laceration of left hand and forearm and complete stripping of all tissues off the right arm.

On hearing recently that Colonel Hunt had a record of some of these cases we immediately asked for an article on the subject. Here it is.

AHWAZ is a small town on the plains of southern Persia standing astride the River Karun. It is important as a pumping station on the pipe line between the oil wells in the hills and the great refinery at Abadan.

At the outbreak of the "three day war" against the Persians in 1941, 25 Indian Field Ambulance established itself in the school buildings on the banks of the river. In September 1941, 21 Combined General Hospital took

over from the Field Ambulance and the surgical cases hitherto treated by them came under my care.

Among them I was surprised to find a Gurkha soldier who had had a forequarter amputation performed following a shark bite. It seemed extraordinary that such an accident could occur in a fresh-water river, some eighty miles from the sea and about thirty miles from the Shatt-el-Arab, that great river formed by the junction of the Tigris and Euphrates, which runs into the head of the Persian Gulf.

This was my first introduction to the sharks of Ahwaz.

This Gurkha soldier was the only Service man attacked by a shark and incidentally the only patient who lived to tell the tale. Twelve other civilian patients who came under my care all died.

It sounds bad, but the circumstances were seriously against good results. The casualties occurred mainly among young children and old people who were either undernourished or feeble with age. Usually the accident happened some distance away from the hospital and transport was both crude and slow. Add to this the extremely serious nature of the injuries and that peculiar oriental determination to die rather than to live, and the reason for fatalities becomes more understandable.

The first and the last of my cases are those that I remember best. The first because it was the first and because the whole incident seemed so pathetically tragic.

A small Persian boy aged 6, was paddling on those slimy sloping rocks by the waters edge whilst his mother was filling a water-pot close by. He slipped and fell and was seized by a shark.

When rescued both arms were devoid of all skin and muscle from the deltoid insertion down to the wrists. Fasciæ and joint capsules only held the bones together. The right hand had been avulsed from the wrist. The ulna was divided as though by a saw at mid-length whilst the other bones showed many grooves where vicious teeth had tried to snap through them.

The child was brought to hospital upon a donkey having been placed face downwards with arms and legs dangling astride. It had taken about an hour to bring him from the scene of the accident through the desert sand and ferocious heat of the Persian summer. He died soon afterwards.

The last case concerned an old man whom we had all got to know and the comparatively minor nature of his injuries together with the speed with which he received treatment made it seem that here at last was a case of shark bite that would survive. This was the way of it.

The C.O. of 21 C.G.H. at the time was an enthusiastic fisherman who spent a great deal of his spare time trying to catch a shark. The tales of those that got away were truly amazing. The one as big as a motor car is well remembered! He tried for weeks with tackle of all kinds and a variety of baits ranging from goats' meat to ripe appendices.

One day he came across an aged native fisherman who gave him the clue to success. He produced a handful of small nuts from a little bag hidden among his underclothes. If these were cut into small pieces, he said, and sprinkled on the water, small fish would presently come and devour them and having done so would lose all sense of balance and swim upon the surface where they could easily be caught. These, he said, were the shark's normal food and true to his word he proceeded to demonstrate how these small fish might be collected.

One early morning not long afterwards I was standing on the flat roof of the hospital making a rough sketch of the people at the river's edge below. Some were bathing, some filling water-pots, others were washing clothes by beating them on the rocks after the manner of the Indian dhobis, whilst yet others were merely carrying out that oriental custom of using water instead of paper as a finishing touch.

Among this little throng I saw the old fisherman ankle deep in water sprinkling some of the grated nuts and gathering in his victims. Presently there was a great noise of shouting and clapping hands and the water in front of him was churned into foam and I saw the old man slip and fall into the water. There he lay upon his back, half submerged while the dorsal fin of a shark swirled up and down close by in water that had a great red stain slowly spreading upon surface.

By the time I got there he had been dragged ashore and examination showed that one foot had been crushed and lacerated but no very grave damage had been done.

We hurried him into hospital but scarcely had we started treatment before he bade us not to worry. "I am going to die," he said, and we saw upon his face that strange expression of a mind convinced. Nothing we could do or say would convince him otherwise and before the sun was set that day he was dead.

There is good reason to remember him for that same evening the C.O. caught his first shark. I well remember seeing him struggling up the bank looking for all the world like the advertisement for "Sailor Brand Salmon."

It was 4 ft. 10 in. long but its weight has slipped my mind. Its dorsal fin had a great healed gash across the base where perhaps it had run foul of some net or cable and within its stomach we found the fragments of glass bangles.

Another old man comes back to my mind, who died twelve days after a shark bite of a secondary hæmorrhage from his femoral artery, having had a mid-thigh "avulsion" for which he refused any form of surgical operation.

He was a man of some local importance and was given a small ward to himself which soon became filled with relatives, mostly women, and all dressed in black. He was an opium smoker and the room soon became filled with that sticky aroma of sepsis and opium smoke.

One morning I was alarmed to see the degree of his delirium which at first I took to be due to his sepsis but later found was partly due to lack of opium

which an enthusiastic young M.O. had forbidden. The moment of his death was dramatic. The still silence of his room was broken by a sudden outbreak of mournful wailing by the women, who stood up and waved their arms about and literally tore their hair and their clothes and bared their breasts so that they might beat them. They danced about in circles and rolled upon the floor to the wide-eyed amazement of some B.O.R. patients who were peering through the windows.

Presently the charpoy was picked up and the dead man carried out shoulder high across the courtyard to the street beyond. That was the last we saw of him.

These three cases well illustrate why surgical results were so poor. There is no doubt that the injuries were appalling and in Ahwaz at least there was a local belief that the shark was a poisonous creature and death inevitable. However, we found no evidence for the latter.

It was said that the sharks had a habit of lashing out with their tails and knocking the victims off their feet who thereupon slipped off the rocks and fell into deep water. This seems unlikely as many of the people were only ankle deep and it is probable that the sight of a shark so terrified them that in their hurry to get away they slipped and fell.

On one other occasion I witnessed a shark attacking. There is rather a lovely suspension bridge across the river which connects the old town of Ahwaz with the new. Whilst walking across this one evening about sunset I heard the shouts of alarm from the banks below and I saw a Persian soldier level his rifle and fire into the water. The shark could easily be seen from that height and though several shots were fired they missed their mark. People on the river bank were hurrying out of the water clutching their pots and pans and dragging children to safety. One small toddler got left behind and stood petrified amid the din. The shark came near and certainly thrashed the water close by and once or twice the tail was seen to break the surface, but it never came into the shallows. Had the child moved it might well have fallen in and disappeared for good. Its terror alone saved it until a man came wading in to grab it.

Before writing this short memoir it seemed worth while writing to Dr. Anderson at Abadan to hear of his experiences. His reply, which he has kindly given me permission to publish, makes interesting reading.

He explains why there is a season in the year when sharks abound in the rivers of that part and also why there are comparatively fewer cases in Abadan than in Ahwaz. Doubtless too, The Anglo-Iranian Oil Company regulates the use of the rivers round the island and controls its employees (or used to before nationalization) and prolonged European influence may have helped to dispel some of the local superstitions. At any rate it is good to know that even the severe cases do well with good treatment and I thank him for the trouble he has taken to give the details he has.

If you ever go to Ahwaz don't bathe in the river!

Letter from Dr. Anderson

ANGLO-IRANIAN OIL CO. LTD.,
ABADAN,
IRAN.

Lieut.-Colonel R. S. Hunt, F.R.C.S.
British Military Hospital,
Tripoli.

October 7, 1950.

Dear Colonel Hunt,

Thank you for your note of September 9, and I have done my best to get some information.

I attach short clinical notes on 11 hospitalized cases of severe shark bite during the years 1945-49 inclusive. In addition we treat some minor lacerations in the Out-patient Department every year, the records of which are extremely difficult to assess.

There is general agreement that these fish only invade the rivers Shatt-el-Arab, Bahmashir and Karun during the months of July, August and September. The reason for this is quite obvious, as it is the time of the year when the fresh-water flow is minimal and tidal incursion maximal, the latter sometimes producing salinity figures in the Bahmashir and Shatt-el-Arab as high as 500 p.p.m. Little is known about the fish themselves and statements from local fishermen are extremely difficult to collate, but the few European observers state that they are about 4 to 6 ft. in length and have a shark-like mouth about 8 to 12 in. wide.

There is no question of their strength and ferocity in attack as will be seen from the record of the injuries which we have treated.

You will see that even very severe injuries heal readily if treated immediately, and that of the 3 deaths recorded 2 followed considerable exsanguination and shock and the third followed extremely severe injury with sepsis.

The bites are not toxic and respond to antibiotics and sulphanilamide extremely well. The victims are largely in the young and aged groups. Only the young swim in these waters. The women bathe and wash on the edge of the river with their clothes on and men go to the local bath. The only aged one in my series was probably bathing or washing in the sea.

You can take it that these 11 cases constitute the incidence of severe cases in our region over the five years, but there is no doubt that other cases must have occurred which either did not seek treatment or were treated in local hospitals in Ahwaz. In Abadan we have established a considerable number of public baths which reduces the use of the rivers for bathing and washing.

I trust this information will be of some use to you and I should be very glad to receive a copy of your article when it has been published.

With kindest regards,

Yours sincerely,

A. ANDERSON, M.D., D.P.H., D.I.H.,

Deputy Chief Medical Officer,

Anglo-Iranian Oil Company, Ltd.

<i>Name, date of admission, and place of accident</i>	<i>Age and sex</i>	<i>Nature of injury</i>	<i>Treatment</i>	<i>Date of discharge, result</i>
Abdol Karmi, 19.8.45. No record of place of accident	Boy Male	Traum. amputation, L. leg lower 1/3. Four days old. Gross sepsis	Guillotine amputation. 4 in. below knee. Sulph. penicillin powder	8.10.45 Healed
Hamid, 6.9.45. Bahmashir swimming	Age 13 Male	Flexion and extensor muscles, R. forearm extensively lacerated. Loss of blood and nerve supply to forearm	Mid-humeral amputation.	7.10.45 Healed
Mehdi, 18.7.46 Karun at Ahwaz swimming	Age 12 Male	Left tendo Achillis severed, calf muscles severely lacerated	Debridement, tendon suture, vaseline gauze pack and plaster of Paris. Penicillin. 4.9.46 Thiersch graft to calf and tendo Achillis area	28.9.46 Almost completely healed
Khodadad, 18.7.46 Karun at Dorquain, fishing—probably with a net	Age 12 Male	Skin and muscles at level just below R. elbow, leaving half radius and ulna bare	Disarticulation R. elbow-joint 13.10.46 humeral cartilage at elbow excised	30.10.46 Healed
Ali —, 10.5.48 Drew a shark in his net but no record of its size	Age 38 Male	8 in. x 4 in. left antecubital fossa of muscle and skin removed, but nerve and blood supply intact	Debridement and application of Thiersch graft immediately. Penicillin	2.6.48 60 per cent graft taken. Healed except central area
Abdul Hussain, 19.8.48 Shatt-el-Arab	Age 13 Male	Complete exposure of R. humerus except long head of biceps with removal of all other tissue. Removal of all extensor and flexor muscles of wrist. Complete loss of blood supply to limb and considerable exsanguination	Amputation of R. arm through humerus. A.T.S. and A.G.G.S. penicillin. (Donor not obtainable)	Death about twelve — fourteen hours after injury

<i>Name, date of admission, and place of accident</i>	<i>Age and sex</i>	<i>Nature of injury</i>	<i>Treatment</i>	<i>Date of discharge, result</i>
Roghai, 2.9.48 Bandar Mashur sea inlet, probably bathing or washing	Age 60 Female	Traum. amputation of left arm, just below axilla; almost complete removal of left buttock. Said to be twenty-four hours old but very septic	Removal of the piece of humerus. Penicillin. Eusol	Death twelve hours after operation
Abdul Imam, 14.12.48	Age 19 Male	Traumatic amputation of left thumb	Disarticulation at M.P. joint, A.T.S. sulphamylamide and penicillin	2.1.49 Discharged, healed
Ismail, 3.8.48 Bahmashir, swimming	Age 15 Male	Laceration of R. quadriceps tendon with separation from patellar attachment. Laceration of popliteal region femur exposed	Debridement and cleansing. Pyocyanous infection. 11.9.48 skin grafting after acetic acid and penicillin locally	Subsequently had to have popliteal nerve sutured 15.12.48. 21.2.49 had operation, but impossible suture rectus to patella so sutured to vastus lateralis and vastus medialis sutured to patellar tendon
Ali, 28.7.49 Bahmashir, swimming	Age 18 Male	Extreme laceration of R. thigh muscles down to the femur on both medial and lateral sides. Severe exsanguination	Amputation above midpoint of femur. Blood transfusion	Death 2½ hours after operation
A. Palmer (Ship's Apprentice) 29.7.49 Shatt-el-Arab. Swimming	Age 18 Male	Laceration wound R. leg through peroneal muscles to tibia. Minor lacerations medial side of calf	Debridement sulphamide locally and penicillin A.T.S. and A.G.G.S. 3.8.49. Clean secondary suture	9.8.49. Peroneal nerve seems to be intact. Wound healed well. Allowed back to ship as skipper anxious to take him