

Boxing injuries

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BOXING injuries rank eighth in frequency amongst sport injuries. There are far more injuries on percentage at ski-ing, hunting, motor-cycle racing, motor racing, rugby and association football and athletics. Out of 200 consecutive injuries treated at the Middlesex Hospital athletic clinic, only eight were due to boxing; the majority were due to rugby and association football and athletics. In 4,350 contests held under the auspices of the London Amateur Boxing Association in the season 1957-1958, 137 injuries were reported, that is about three per cent. There were 42 cuts in the region of the eye, six of the lips, three of the forehead, two of the ears, three of the mouth and one of the nose. There were three fractured metacarpals, two fractured noses, 60 knockouts and nine cases of amnesia without loss of consciousness. In addition, there were five sprains involving the metacarpophalangeal joint of the thumb or interphalangeal joints of the fingers. In the season 1958-1959 there were 2,400 contests, with 132 recorded injuries. There were 28 knockouts, 14 cases of amnesia without loss of consciousness, 45 cuts around the eye, eight of the lips, five of the mouth, three of the face, three of the nose and one of the head. There were nine cases of black eye, four fractured metacarpals, five sprains of interphalangeal joints, two cases of bruised ribs, one bruised neck, one bruised arm and one sprained ankle. There were two cases of vomiting of unknown origin and one death.

The commonest boxing injury is simple nose bleeding. This can easily be stopped during rounds by sitting the boxer upright, pinching the nares and applying a cold sponge. If the bleeding persists after the bout, plugging with adrenalin gauze or adrenalin soaked cotton-wool usually stops it. The plugging should be removed after twelve hours. More severe bleeding may indicate obvious damage to the septum and this will mean early removal to hospital, where the bones can be manipulated with Walsham's forceps before bleeding and oedema cause obstruction.

Deflected septum and fractured nasal bones

Deflected septum

A cartilage injury is relatively common and may cause considerable nasal obstruction; damage to the ethmoid or vomer is rare. Manipulation should be done within ten days. Often when oedema subsides manipulation is found to be unnecessary. Boxing can be resumed after two to three months. If manipulation is unsuccessful a submucous resection will be necessary; this means the abandonment of boxing, as does remodelling of nasal contours.

Fractured nasal bones

This is rare; two cases in 4,350 contests. Elevation by Walsham's forceps is indicated; boxing should be forbidden for three months.

Abrasions and lacerations and other injuries to the head

Abrasions

These are common on the face and scalp. Bleeding should be stopped by pressure;

fibrin foam applied with pressure on a pad of gauze or cotton-wool is usually successful in obstinate cases. Bathing of the wound with warm saline is followed by the application of cetrimide (one per cent) and light dusting with sulphathiazole powder. Antibiotics should not be applied locally as they may cause sensitivity reactions.

Lacerations

These are usually caused by the opponent's head. When the wound is dry and has been cleaned as indicated above, it should be sutured to ensure sounder and more rapid healing as well as less disfigurement. The so-called 'cut eye' is usually situated over the supraorbital ridge or in the upper eyelid. In the scalp, if the wound has gone right through the thickness of the skin, suturing is essential, coapting the whole of the cut surfaces. Elsewhere, if there is no contusion and no dead space in the depths, it can be closed by approximating the skin edges. Von Horff's clips are an easy and quick way of getting the skin edges together. A gauze dressing with collodion is applied and the clips are removed after a few days. Small dry wounds can be held together and sealed with a plastic material, e.g., Nobecutane. The most suitable suture material is silk thread. This can be obtained already threaded into small curved needles in sterile containers, and a Gillies needle-holder is most useful. Sutures should be removed not later than after five days. The sutures can also be applied through a fine hypodermic needle. Dumb-bell plaster strips applied at right-angles to the wound are also useful. Boxing should be prohibited for at least four weeks.

Haematomas

The common or garden 'black-eye' hardly ever needs treatment, but cold applications limit the extravasation of blood. A haematoma of the auricle if seen early requires aspiration and the injection of hyalase, 1 to 2 ml. Otherwise the clot must be evacuated, the wound plugged and allowed to granulate from the bottom.

Tablets containing streptokinase and streptodornase given after boxing hasten the resolution of haematomas and bruising and the healing of cuts.

Fracture of the skull and intracranial haemorrhages

Seven cases in 13 years; these are very rare.

Fractures of the jaw

These are also rare. The average is about two a season. A boxer should be given first-aid treatment and, if there is a dislocation present, this should be reduced first by pressing on the lower molar teeth downwards and backwards, while moving the chin upwards; he should then be sent to a maxillo-facial unit. Boxing should be forbidden for six months.

Serious eye injuries

These are also very rare. I have seen four cases of detached retina in amateur boxers in 40 years, but I have seen four cases occur after squash rackets.

Fractures and sprains

The commonest fractures are of the first metacarpal. Fracture of the shaft usually occurs within the proximal third of the bone. Any significant displacement or angulation should be corrected by manipulation under an anaesthetic followed by immobilization for three to four weeks. This is followed by active movements; painless function is restored in six to eight weeks.

The Bennett type of fracture of the base of the first metacarpal involves a true dislocation of the first carpometacarpal joint. Reduction is carried out by skin, pulp or skeletal traction for three weeks, applied to the thumb in abduction which is incorpor-

ated in a below elbow plaster-of-Paris cast. Immobilization is maintained for a further three weeks, followed by active movements. Boxing can be resumed after three months.

Fractures of the shafts of other metacarpal bones seldom require anything more than plaster-of-Paris protection for a week or so. If there is angulation or shortening due to overlap, manipulative correction should be undertaken and the wrist and metacarpals immobilized for three to four weeks. Boxing can be resumed after eight weeks.

The commonest joint to be damaged is the first metacarpophalangeal joint. There may be extensive damage to the capsule with possible rupture of a collateral ligament, or a chip of bone may be avulsed. Immobilization in semiflexion for three weeks is essential, followed by active exercises. Operative repair may become necessary. Boxing may not be possible for six weeks. Sprains of the interphalangeal joints should be treated on similar lines.

Fractures of the limb bones and injuries to other joints are extremely rare in boxing, although I have had to replace a displaced semilunar cartilage in the ring, and have seen one case of a dislocated hip!

Concussion

This is caused by a direct blow to the lower jaw, by an accumulation of the effects of blows on the cranium or by the head striking the floor of the ring. Unconsciousness may also be caused by a blow on the carotid sinus, a blow over the heart and rarely by a blow to the solar plexus. In the latter case, the boxer usually remains conscious throughout, but there is a reflex temporary paralysis of his legs which prevents him rising. I have seen no ill effects following this blow. Most boxers regain consciousness by the count of ten and are able to walk to their corners unassisted. If consciousness has not been regained by the end of the count, the boxer is allowed to recover on the floor of the ring. His head is supported and turned on one side, making sure that there is a good airway. This may require holding the tongue out with forceps or a piece of gauze. If he remains unconscious for any length of time, he should be removed from the ring on a stretcher and sent to hospital for observation. If there is retrograde or post-traumatic amnesia, even without loss of consciousness, this should be treated as concussion, and the patient admitted to hospital. There are about one per cent of knock-outs in the course of a tournament. For a boxer to become dazed by a head blow more than once in a bout is unusual.

Post-traumatic epilepsy has never been encountered, while the punch drunk syndrome has only been seen once in an amateur boxer. He was an army boxing instructor who took on all and sundry for eight hours a day, five days a week and developed cerebellar atrophy.

Very little appears to be known of the supposedly punch-drunk ex-pugilist's intellectual capacity during his pre-fight years, his environment, his heritage or his educational advantages. A bashed-in nose, scars over the eyes and cauliflower ears are not indicative of cerebral dysfunction.

The electroencephalogram has been used in the detection and prevention of cerebral complications. The more severe the injury, the more severe and persistent is the electrical abnormality. There is a lack of correlation between the clinical and EEG findings. Comparable trauma in a young person produces more severe changes than in the older subject. Since the introduction of the four-week enforced period of rest after concussion, we have examined 78 boys over a period of four seasons who have had severe concussion, but no abnormal EEGs have been found.

One hundred boxers had their skulls x-rayed to try to correlate the thickness of the skulls with proneness to knockouts. One boy was found to have thin frontal bones and

was banned from boxing, but no correlation could be found between the thickness of the skull and proneness to a knockout.

Kaplan and Browder in the United States made a study of 1,043 professional boxers, with particular reference to head injuries. The method of study consisted of observations at the ringside, analysis of head blows with slow motion photography and electroencephalography. Observations at the ringside and more detailed examination in the dressing room after the bout, failed to reveal any abnormal neurological features even in those contenders who lost their bouts by a knockout. A critical review of slow motion photography of segments of bouts confirmed one major impression gained at the ringside: namely, that most blows to the head were short of their mark or deflected by the opponent.

There are hazards in all competitive sports and fatalities occur in boxing as in other sports. Since 1946 there have been nine fatal cases in the amateur ring. These have all been due to intracranial haemorrhage (subdural or extradural haemorrhage accompanied by mid-brain haemorrhage). All these cases were caused by the boxer falling with the back of his head on to the ring. In two cases with fracture of the skull, it was noted that the boxer had an exceptionally thin skull. There have been seven deaths amongst professionals since 1946, but as you may know, there are far less professional bouts than amateur. The number of fatalities, regrettable as they are, compares favourably with those in other sports.

Amateur boxing has the lowest fatal risk of any self-imposed hazard.

A study of depression in two general practices. Including a double-blind comparison of desipramine and opipramol. S. C. ROGERS, M.B., B.S., M.R.C.G.P., F. J. DAVIES, M.R.C.S., L.R.C.P., and A. W. GALBRAITH, M.A., M.B., B.Ch. *Clin. Trials J.* 1969. 6, 5.

The incidence and treatment of depression, with particular reference to imipramine (Tofranil), is reviewed. A double-blind trial, comparing desipramine (Pertofran) to opipramol (Insidon) in the treatment of depression and anxiety in two general practices, was carried out in which patients on desipramine showed a higher percentage of improvement in their depression scores during the second week. However, this trend was reversed by the fourth week and no significant differences emerged. After the first week the anxiety scores of the patients on opipramol showed a higher percentage improvement and at the fourth week this was statistically significant ($P < 0.05$).

The incidence of depressive illness requiring treatment with anti-depressant drugs was estimated to be three per cent of patients on the list of one practice per annum. The relapse rate was low in the first year of follow-up but was nearly 25 per cent in the second year. The advantages and disadvantages of comparative trials in general practice are briefly discussed.