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Boxing— Is it Worth a Regimental Pride?

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Abstract: Boxing is a contact sport, aiming at imparting blows to the opponent's head till he either accepts defeat or becomes unconscious. From the barbaric sport of olden times, it has become a relatively safe sport with the introduction of safety measures. However these measures are of limited value in preventing head injuries from boxing. Injuries may be either acute or the spectrum of cumulative effects, which manifests later.

Keywords: subdural hematoma; boxing; head injury.

INTRODUCTION

Boxing is one of the oldest sports of the civilized world. The Greeks introduced it formerly in 688 B.C. Ancient boxers followed few rules. Boxing round was continued either till the player was knocked out or he admitted defeat by raising two fingers. The Romans later invented "caestus" in 150 BC where the boxing gloves were either wrapped with leather thongs studded with metal spikes or reinforced with iron or lead, making boxing an inhuman and one of the deadliest contests[1].

As the consequences of boxing were slowly understood, safety measures were incorporated such as limiting the number and duration of rounds, usage of non-reinforced gloves and mandatory use of safety headgears and dental guards. Though the numbers of fatal injuries have reduced, still it seems to be of limited value in preventing head injuries either immediate or cumulative[2].

ILLUSTRATIVE CASE: WASTED YOUTH AND VEGETATIVE LIFE

An eighteen-year-old recruit was practicing for the regimental boxing competition. He had apparently observed all the safety measures. After one of the practice sessions he complained of giddiness. He however had another practice session, the very next day after which he had increased giddiness. After a few hours he was found unconscious in the barracks. He was immediately evacuated to the nearest medical set up where he was suspected to have sustained head injury and was further evacuated to this hospital. At the time of admission, admission he was unconscious with G C S score of E1 V1 M4. On examination right pupil was not reactive to light and he had hemiplegia on the left side. CT brain showed a large subdural hematoma in the right frontotemporal region with associated brain swelling producing significant midline shift to the left. He was taken up for emergency craniotomy. The Sub dural hematoma was evacuated and the procedure was completed with duroplasty and removal of the bone flap in view of the severe brain swelling. Postoperatively the patient continued to be in a vegetative state and further developed hydrocephalus necessitating a shunt. Even after six months of operation the patient is not self-dependent, and he is unlikely to make it as a fit soldier in future.

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DISCUSSION

Boxing was developed as a sport by Romans when killing the opponents with spears and fighting with caged wild animals like lion or tiger was being enjoyed by the king as well as the audience. Boxing has survived till this modern age as brutalities produced by the reinforced gloves were banned and the termination of the event has became just knocking down the opponent instead of killing. Boxing is the only contact sport of the present day world, whose purpose is to render the opponent unconscious resulting in temporary or permanent damage[3].

The mechanism of injury to the brain due to boxing is complex, as it is the sum total effects of punches by the gloved fist on the skull and motion of the skull along with the brain, in response to it. Injury also depends upon the number and duration of the rounds, safety measures used by the boxer and type of boxing whether professional or amateur[4].

With the impact initially the skull moves faster than the brain because of the inertia of the later and then it comes to rest. The brain continues to move even after cessation skull movement. The impact force is responsible for the concussion. With the movement there is impaction of the brain on the boney ridges of the skull or on the edge of the

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dural attachments. This is the underlying mechanism for development of contusion and interparenchymal hemorrhage where as rupture of the veins crossing the subdural space (bridging veins) result in the development of subdural hematoma[4].

Acute subdural hematoma with underlying brain damage has the highest mortality (60-90%). Wilberger J E has suggested that along with the extra axial collection of blood in the subdural space there is a loss of auto regulation which leads on to massive brain swelling[5,6].

Repeated punches on the head results in a chronic injury to the brain, which is also called as 'punch drunk syndrome,' 'dementia pugilistic a' or chronic traumatic encephalopathy(C T E). The syndrome of C T E includes memory impairment, behavior and personality changes, speech disturbances, and pyramidal tract dysfunction extra pyramidal tract dysfunction[7].

The imaging abnormalities consistant with C T E include volume loss inappropriate to the age, demyelination and gliosis, cavum septum pellucidum and cerebellar tonsillar scarring, non-specific white matter disease[8].

Realising all the above effects of C T E, safety measures have been introduced. Biting, grouching, kicking and other brutal techniques were outlawed as early as 1897. Marquis of Quessby introduced boxing gloves, three minute round, ten second knock out and safety helmets. Further amateur boxers are made to observe all the safety measures and bout is fought on the point basis unlike the knocking down system, which is still prevalent in professional boxers[9].

Amateur international boxing association (A I B A) has recommended many guidelines for improving the safety standards of amateur boxing. Scoring to win is point based than knock out which is the objective of professional boxing. Further it has qualified the inevitable knockouts into following grades.

Grade 1: This is characterized by transient confusion with no loss of consciousness, and symptoms resolve with in fifteen minutes. These patients are subjected to head scan, hospitalized when indicated with a log book entry and is not allowed to return to the ring for seven days.

Grade II: This is characterized by concussion symptom lasting more than fifteen minutes with no loss of consciousness. These patients are subjected to head scan, hospitalized when indicated with an entry in the log book and are not allowed to return to the ring for twenty eight days and neurologist must certify fitness with a fresh scan before next entry.

Grade III : This is characterized by loss of consciousness. Here, the bout is immediately stopped and CT brain carried out. After the scan the patient is hospitalized. Boxing is not permitted for one year or he is forced to retire[10].

Although training is less intense and less competitive; more time is spent in training than in competition, injuries are sustained during training too. Information pertaining to mechanism of injury –for example head striking the floor, duration and number of rounds fought, safety equipment worn is never reported and usually goes unrecognized. Zazryn[11] after studying injuries to boxers over the period of sixteen years has recommended that the collection of the above information along with age of starting the career, current age number of fights fought in the career, should be a matter of priority. He also reported that injuries to the eye region, hearing apparatus upper extremities are quite common which generally go unreported.

CONCLUSION

The essence of a sport is to develop fighting spirit, enhance physical capabilities and provide entertainment to the public. Injuries are the offshoot of the other sports too. But no other sports aim at debilitating the participant either temporarily or permanently. Despite all the safety measures and presence of a doctor near the ring, the boxing injuries continue to occur. Considering the spectrum of injuries produced by boxing, it felt that it is definitely not worthy as a measure of regimental pride. Also it is high time that we do not set an example of Muhammad Ali every time a boxer survives!

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