INJURIES OF THE EAR IN WAR.

By Macleod Yearsley, F.R.C.S.,
Senior Surgeon to the Royal Ear Hospital, &c.

The effect of modern machines of war upon the ear and its function will be not the least interesting and instructive of the additions to our knowledge resulting from the present struggle. As Wells prophesied, in his "War in the Air," war has become "a matter of apparatus, of special training and skill of the most intricate kind," although, apparently, grit and pluck still tell, especially when of the British variety. But the old din of battle is as different from the shattering noise of modern warfare as the clatter of the *mêlée* of armour-clad knights must have been from the roar of the guns at Waterloo, a sound which carried as far as Deal and Dover. One may venture to prophesy that many of the most serious aural troubles to be met with will be the outcome of this new and augmented din.

The injuries from which the ear may suffer in war may be divided into two groups—those which are due to the actual impact of weapons, such as sword and bullet wounds and blows from rifle butts, and those which are the effect of explosions, especially of such high explosives as are employed at the present day. The former will, probably, not differ markedly from similar wounds in earlier campaigns, but the latter are likely to be more serious and destructive.

Wounds of the auricle from sword cuts may vary in severity up to complete severance. Their importance naturally depends on the severity of the wound and on the extent of the injury, but such lesions usually heal well and rapidly. The same may be said of the wounds made by high velocity projectiles passing through the auricle, which are slit-like and quick to repair. The course of incised wounds of the cartilage of the pinna, such as those which may occur in hand-to-hand fighting, should be favourable, even when the pinna is cut through to a large extent.

Gunshot wounds of the temporal bone may involve the middle ear either directly or indirectly by extension of a fracture through the petrous part of that bone. A bullet may strike and be imbedded in the middle ear or mastoid, and may completely destroy both tympanum and labyrinth. Putting aside the presence of complications, which are likely to occur, the possibility of recovery is not excluded, even in cases which run their course with serious clinical symptoms. Thus, a case will be found recorded in Politzer's "Textbook of Diseases of the Ear" in which a gunshot wound of the labyrinth, accompanied by a discharge of serous fluid, recovered five weeks after the removal of the projectile. Rare examples of injuries of the sound-conducting apparatus of the ear are also quoted by Politzer as follows:

1. Gunshot wound of Eustachian tube, in which the bullet entered beneath the zygomatic arch, passed through the left upper jawbone, and became wedged in the tube.

2. Gunshot wound of the petrous portion of the temporal bone, in which, after chiselling away the posterior wall of the meatus, the projectile was found lying immediately against the sigmoid sinus, and removed.

3. Gunshot wound in which the bullet penetrated the parotid gland, the meatus and the mastoid process, and reappeared at the posterior portion of the latter, resulting in stricture of the meatus, fistula of the parotid gland discharging its contents into the meatus, and facial paralysis.

4. Gunshot wound in which the skiagram showed the bullet to be lying in the neighbourhood of the carotid canal.

No cases have yet been published of sword or bullet wounds of the ear occurring during the present war, but it is more than probable that those which occur will afford an interesting series of injuries.

Blows upon the head or ear will in the majority of cases result in a rupture of the tympanic membrane. I have already seen one such case in a soldier who received a blow, probably from the butt of a rifle, during a charge. He was unconscious for twenty-six hours, and, on recovering his senses, was quite deaf in the right ear. The drum membrane on that side showed the scar of a recently healed rupture. His deafness, together with a whistling tinnitus, was rapidly recovering. Ruptures of the tympanic membrane may occur in this way, either by blows on the ear itself, or on the skull near the ear, or by the extension of a fracture through the temporal bone, whereby the membrane is torn at its circumference. Provided that such injuries are not interfered with by meddlesome treatment, they heal rapidly. The question of damage to the hearing is almost entirely one of concomitant damage to the internal ear. A rupture of the drum, *per se*, does not result in impairment of hearing of a more than temporary nature, function being restored with successful healing. If, however, the injury is accompanied by concussion of the labyrinth, deafness may be severe and permanent. Also, when a rupture occurs in connection with a fracture of the base of the skull, permanent deafness may ensue from the fact of the fissure passing through the cochlea.

previous page next page