

zone of hyperalgia just above paralyzed area. In some cases where bullet has passed close to cord, symptoms similar to actual lesions show at once, but after a few days some sensation and a little motion is noticed. This is difficult to explain, may be due to blood-clot, and may be the same as causes these symptoms in nerve trunks, etc., may be due to vibratory effects.

Bullet wounds of spine are not necessarily fatal, and whether bullet should be removed or not will depend largely upon its location. The X-rays serve a most useful purpose in locating the bullet. If bullet is in an accessible position, it should be removed. It may, however, be in such relations to the intrathoracic viscera as to make it hazardous and unless the wound has been infected by clothing or injudicious probing, it is well in such cases not to interfere. In any surgical interference, the strictest cleanliness must of course be observed. The telephone probe may be employed to advantage in exploring for the bullet. If cord is compressed by fragments of bone or blood, or the bullet, it should be freed by operation. If bullet has passed through the body, but injured cord in its transit, it is proper to operate if symptoms do not improve in a few days, as they may be due to pressure that can be relieved.

*Head Injuries.*—Bullet wounds actually penetrating the skull and contents constitute some of the most remarkable cases met with. The range greatly influences the amount of injury inflicted on the bone. Also the more oblique the bullet enters, the greater the damage to the inner tissues. If entrance and exit are at right angles to axis of skull, holes are bored clean through and are scarcely seen on external inspection, but inner table of bone would be more or less broken up at aperture of entrance. Symptoms of this class of injuries vary with position of the wound, but it is wonderful the severity of the injury patients recover from. Injuries of internal table of skull is more marked in wounds caused by the modern than with the old fashioned bullet. The scalp wound heals so rapidly, the significance of the case may the more easily be overlooked. The Mauser sometimes causes external oblique fractures and splits bone badly even when it does not strike obliquely.

Another form of wounds to skull is the so-called "gutter fractures," where the bullet grazes surfaces of vault inflicting a superficial injury. No cerebral symptoms are set up, and one is liable to consider it as a slight injury, but the inner table is usually broken badly and it seldom happens that some of the sharp fragments are not driven into the dura mater, and even penetrating and wounding the brain tissue and if not removed will cause cerebral or meningeal irritation. In some of these