

trunk, causes by reflex action increased secretion from the lachrymal gland. (3) Chronic coughing or vomiting from wax in external meatus. In this the pneumogastric is at fault, for though the greater part of the external meatus is supplied by the inferior maxillary, a small portion—the posterior—is controlled by the auricular branch of the pneumogastric, and the pneumogastric supplying the larynx, the irritation is referred from the ear to the terminal fibres of the superior laryngeal, the sensory branch of the pneumogastric to the mucous membrane of the larynx and coughing results, or to the terminal fibres in the stomach and vomiting occurs.

(4) While in appendicitis we have the cardinal symptoms of pain, tenderness and rigidity, the pain may not be in the usual situation of the appendix, but may be felt most intense on the opposite side of the abdomen or at the umbilicus. This is because the appendix is supplied by the superior mesenteric plexus of the sympathetic, and this plexus also supplies the rest of the small intestine, hence the pain may be reflected to the parts occupied by the small intestine.

(5) Contraction of the abdominal muscles. When laying a cold hand on the abdomen one is struck by the almost instantaneous contraction of the abdominal muscles. This contraction is a wise provision of nature to guard against injury to the abdominal contents. In the abdomen nature relies on flexible muscles to protect the easily injured structures, whereas in the cranium, thorax and pelvis the delicate organs are protected by a bony framework. The skin of the abdomen acts as an outlying picket for the muscles. They, skin and muscles, are supplied by the same nerves—the intercostal—the skin by the lateral cutaneous branches and the muscles by the main trunks, and by this arrangement a quicker result occurs than if the reflex act were brought about by a less direct path.

The above are examples of the first variety mentioned, *i.e.*, direct paths. As examples of indirect or the second variety we have the marked rigidity of the abdominal muscles in inflammatory conditions of the viscera. At first glance it seems strange that there should be any nervous connection between these structures, because the viscera are supplied by the epigastric plexus of the sympathetic system at the back of the abdomen and the muscles by the intercostal or spinal system, but it is plain when we consider that the epigastric plexus has the great splanchnic from the sympathetic of the chest as its main derivative and the intercostals have branches running to the root of the splanchnic, hence we can realize how thoroughly nature binds parts together, for here the delicate viscus is in immediate contact with its natural protector, *i.e.*, the abdominal muscles. In this example the path is through