

significance under certain circumstances is its *absence*, for often it does not imply under such circumstances the absence of lesion. (a) It is wanting, of course, when there is no muscle, or perhaps very little, to undergo spasm. Hence in atrophied abdominal walls, as occur in women from overdistension, such spasm may not occur. In a case of perforating gastric ulcer with oncoming peritonitis, operated on by Keen, within six hours of perforation, no spasm or resistance was detected. Similar cases of such character have occurred in cholecystitis, when often for similar reasons—mural atrophy—the muscle spasm is wanting. (b) It disappears with the onset of toxemia, and hence a rapidly lessening resistance with the slightest evidence of advancing toxemia, as indicated by the expression, the tongue, the pulse-rate, the mental condition, even though the temperature falls, is of grave significance. It may be found that the leukocytes do not increase, but may even fall to a moderate height, as 9,000 to 12,000 or even less, as we also find in grave pneumococcus infections, when a moderate leukopenia may be present.

Tenderness of Cutaneous Surface. Hyperalgesia.—Hilton, Head, Mackenzie, and others have repeatedly called attention to alterations of cutaneous sensibility in the distribution of spinal nerves related to affected organs within the body. Sherren* has called renewed attention to this cutaneous hyperalgesia, elicited by gentle friction or pinching of the skin or by the head of a pin or some blunt instrument. That such hyperalgesia may exist is well known, but the point I wish to make is, if it exists and then disappears, as may also spasm and pain, the change is of ill omen unless all other symptoms subside. The absence of, or rather the disappearance of hyperalgesia means the occurrence of gangrene or perhaps perforation.

PAIN IN THE ABDOMEN DUE TO GENERAL CONDITIONS.

The Intoxications.—I shall pass over that due to lead-poisoning, only venturing to reinforce the warning of Janeway, and speak of abdominal pain due to uremia. The French authors have long since called attention to this symptom, and many years ago I made a verbal communication to the West Philadelphia Medical Society on it. I had seen it, as had likewise the French observers, in or preceding the uremic convulsions of puerperal nephritis. In the instances under my observation, the pain was in the epigastrium and both hyperchondria. Only recently I

* "On the Occurrence and Significance of Cutaneous Hyperalgesia in Appendicitis," James Sherren, F.R.C.S. Eng., *Lancet*, September 19th, 1903.