

ART. II.—*Muscular Fatigue*. By WM. H. HINGSTON, M.D., L.R.C.S.E.
Fellow of the Imperial Leopold Academy; Member of the Pollichia of Bavaria; of the Société Médicale Allemande of Paris; Surgeon to St. Patrick's Wards, Mont Ste. Famille.

The sensation of fatigue has been experienced by most persons. When within certain limits, it disposes to refreshing and invigorating sleep. When excessive, however, the feeling of *malaise*—nay, almost of pain, banishes for a time “Nature’s sweet restorer.” The physiological changes may be summed up in increased *débris* of muscular tissue, and its elimination from the system; increased exhalation of carbonic acid (which continues for some time after the discontinuance of the exercise which gave rise to it); and a slight elevation of the temperature of the body and particularly of the extremities. When the exercise has been excessive, and when fatigue has been the result, the exhalation of carbonic acid is diminished, and that of urea increased. But there is a *local* change connected with the excessive fatigue or over-exertion of the voluntary muscles to which my attention has been directed by the occurrence, among others, of the three following cases—a local change which I have not seen described in any pathological work within reach.

It may be that a more extended search than what my leisure afforded would have placed me in possession of facts or observations of such a character as to render these remarks unnecessary; but, so far, I am ignorant of any record of similar cases, or of any statement which could lead one to infer that *muscular inflammation* or myositis, as it is termed, may result from the violent exertion of a voluntary muscle. Pathologists, generally, speak of muscular inflammation but as either arising spontaneously, or (which is more frequent) resulting from the various injuries to which these organs are subject, whether incised, lacerated, punctured or gun-shots wounds, or crushing, rupture, stretching mechanical irritation or concussion as Rokitansky styles it. It may be the pleasing duty of some one of the contributors to the Journal to erect a theory, meanwhile I proceed with the illustrations.

CASE 1st.—Occurred in the person of a medical gentleman of this city. Early in last autumn he started at full speed in pursuit of a passing vehicle, and overtook it after a rapid race of about a quarter of a mile; not, however, without severe fatigue in the most convex portion of the front of both thighs. On the following day, both recti were red, painful, and swollen midway between the pelvis and knees; the skin became darker and intolerant of the slightest touch; swelling gradually increased for a couple of days; remained stationary for about thirty-six hours and then gradually subsided.

CASE 2nd.—G. B——, a small, thin, but healthy young gentleman took the field in the autumn of '59 with the Fox-hounds, mounted upon a very spirited powerful animal. The ride was long and fatiguing; during a portion of the day the racing propensities of his Bucephaloid could with difficulty be restrained. A few days afterwards pain of a severe lancinating character was experienced along the belly of the left biceps; the part became hot and red; an abscess formed, which was opened by the writer, and about two ounces of seropurulent