## MEDICINE AND SURGERY.

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may, perhaps, cause some growth, or increased capacity for contraction, in the muscular fibres that have not yet suffered. It is possible also, that it may, to some extent, divert the trophic energy from the interstitial tissue, since cessation of muscular exercise is certainly followed by quicker failure of strength. Hence it is desirable that the patient should carry out carefully planned gymnastic exercises, so arranged as to call into action the muscles that most need help. These thoroughly persevered in, have seemed, more than any other means, to retard the disease. But they have not in any case arrested it. Rubbing and massage are useful, combined with passive movements, in lessening the tendency to mus-

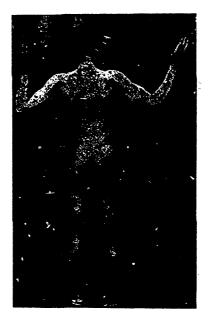


FIG. 3. PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS. E. B. S., 26 years.

cular contraction and consequent deformities. The influence of muscular exercise renders it very important to keep the patient on his legs as long as possible. The ability to stand and walk is generally lost, through the contraction of the calf muscles, some time before the muscular weakness would take the patient off his feet. In such cases tenotomy may restore the power of walking for some years, and when contraction returns, its removal has, a second time, set the patient on his feet again. The operation is thus distinctly beneficial."<sup>(4)</sup>

Progressive muscular atrophy is a chronic progressive affection characterized by a wasting of the voluntary muscles. It is exceed-