

clusions drawn from examination of it, are often quite vitiated by non-attention to this matter. In the first place, it is absolutely essential that the limb be quite relaxed when the reflex is being examined. For this purpose the recumbent posture is best suited, and the limb should be slightly everted, a pillow being, if necessary, placed under the outer side of the knee. It is never permissible to test the reflex when the patient is in a sitting posture and holding out the limb, though this is an only too common mode of procedure. It is however sometimes possible to test it in this posture if due care be taken adequately to support the foot and the upper part of the leg. In the second place, the sole should not be tickled, for this only evokes confusing semi-voluntary movements. The stimulus should be a firm, steady one, and, with an easily excited patient, it is best to press the thumb against the sole for a short time until he is accustomed to the contact and until the foot is completely at rest. Attention should now be concentrated on the big toe, and indeed on only the tarso-phalangeal joint of this toe; flexion or extension at this joint is the crucial thing. The abnormal response, known as Babinski's sign, differs from the normal one not only in being a movement of extension as well as of flexion, but also in being much slower and in being maintained for a much longer time. This is well seen in the present case. Movement of the big toe is, however, far from being the only characteristic of the sign; of the other points, three may be mentioned. Whether the other toes flex or extend is a matter of little interest, but an occurrence of much significance, seen more frequently in children, as here, is the spreading out of the toes that sometimes accompanies, or occasionally replaces, the extensor response of the big toe; this is known as the "fan" sign. Again, eversion of the foot at the mid-tarsal joint frequently replaces the normal inversion that occurs when the sole is stimulated. Lastly, with Babinski's sign, the tensor vaginae femoris responds later than the leg muscles, instead of, as in the normal, earlier than these.

Of the numerous new reflexes that have been discovered in the past few years, I should like to call your attention to two, for they are easily to be observed in the present case. The first is the "paradoxical reflex," first described by Schäfer some ten years ago. It is so called because pressure over a flexor muscle, the lower part of the gastrocnemius, elicits extension of the big toe, or even of all the toes; in the normal this elicits flexion of the toes. The sign has exactly the same significance as Babinski's sign, and indeed it has recently been shewn¹ that