most frequently some portions remain intact. The presumption is that in cases in which recovery either total or partial occurs, edema was the cause of paralysis. In injuries by shell fragments the chances of recovery are the slightest if the wound is deep seated in addition to the functional lesion. There may be fragments of bone or clot directly compromising the dura, the removal of which is indicated chiefly, however, for reason of infection of the wound. Four cases are reported of this class. The spinal column was fractured in three of them while there was no demonstrable bone injury in the fourth case and in none of them was there any appearance of pressure on the dura and in none of them was it opened. The article is written to call attention to such cases.

Brookover, Charles. THE PERIPHERAL DISTRIBUTION OF THE NERVUS TERMINALIS IN AN INFANT. [Jour. of Comp. Neurol., 1917, XXVIII, p. 349.]

This paper is based on two series of sagittal sections of stillborn negro infants at about full term. Brookover's description is based largely on a pyridine silver preparation of the right half of the nose. The modification of Ranson's method used by Huber and Guild (1913), on the rabbit was used to permit of the section of the cribriform plate after decalcification. As in the rabbit, the peripheral rami of the nervus terminalis lie next the cartilaginous septum deep to most of the vessels and other structures of the nasal mucosa. Centrally the ganglion terminale lies median to the olfactory bulb, embedded for the most part in the dura lateral to the crista galli. Brookover sums up by saying that the peripheral nervus terminalis is so large in man that it may be said to be hypertrophied as compared to the known development in other mammals, without appreciably increasing its central root. In addition to many cells in the ganglion terminale it contains about fifteen hundred cells peripherally under the nasal mucosa. Though disposed in three or four chief rami emerging from the lamina cribrosa there is a vast network of interlacing bundles deep to the main arteries. Some of the fibers trail over the walls of the arteries, but the pyridine silver method does not reveal ultimate endings. There is considerable evidence that the interlacing rami of the nasopalatine nerve send a bundle of considerable size through the cribriform plate to establish a sympathetic chain connection posteriorly via the sphenopalatine nerve and ganglion. More work is needed to settle this point. [Leonard J. Kidd (London, England).]

Reynolds, C. E. INFLAMMATION OF CAUDA EQUINA. [Journal A. M. A., Jan. 4, 1919.]

The author reports a case of inflammation of the posterior roots in the cauda equina on the right side in a man, 48 years of age, without

specific history or positive Wassermann, who suffered from rather obscure symptoms similar to those described by Kennedy, Elsberg, and Lambert, in 1914, thus making a sixth case of obscure disease of the cauda equina relieved by operation. The roentgenograms were negative but operation revealed the nerves of the right side imbedded in a purplish mass of apparently inflammatory material, and probably involving the anterior roots on the left side, also. The actual boundaries of the mass were not looked for, for fear of permanent damage to the bladder function, and no attempt was made to remove the whole of the affected tissue. Immediate relief was obtained after operation, and the bladder acted normally for a week, followed by two weeks of retention requiring catheterization. Since then the function is normal. The paralysis has disappeared largely, and the patient walks and expects to return to work. There is a slight band sensation in the region of the right knee, but the muscular tissue has increased in the legs and swelling and blueness of feet have disappeared. This medicinal treatment was hexamethylenamin and potassium iodide on alternate days for seven weeks, after which potassium iodide was alternated with an iron, arsenic and strychnine mixture.

King, J. L. KNEE JERK IN WOMEN. [Am. Jour. Physiol., Dec., 1918.]

Taking the knee-jerk as a physiologic index of the tone of the nerve centers, King believes that there is a period of hyperexcitability immediately preceding, accompanying or following menstruation and a tendency after that time toward a fall approaching to an intermenstrual average.

Low, R. Cranston. HERPES ZOSTER: ITS CAUSE, AND ASSOCIATION WITH VARICELLA. [British Medical Journal, January 25, 1919.]

The author reports three cases of herpes zoster, each of which was followed by one or more cases of chicken-pox either in the same family or in the same hospital ward, after an interval of nineteen, thirteen, and two days respectively. These cases support similar observations made first by Bokay in 1892 and since then by a number of other observers. In all the recorded cases the chicken-pox eruption appeared in from eight to twenty-one days after contact with a case of herpes zoster. In one of the author's cases, two days interval only elapsed between the appearance of herpes zoster and chicken-pox but as both patients had been in hospital for some time, the infection was probably brought by visitors. The converse condition, that is chicken-pox followed by herpes zoster, has also been reported by several observers, but not so frequently. Further, cases have been recorded from time to time in which herpes zoster and a varicella-like eruption have occurred in the same individual. These facts would lead one to conclude that the two conditions are due to the same virus. The author would go further, and suggests that in