99 (1681)

A clinical method for the quantitative estimation of calcium in blood.

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To 1 c.c. of blood serum in a 10 c.c. test-tube, add 4 c.c. of a 1 per cent. solution of ammonium oxalate. Let stand for ½ to 1 hour, and centrifuge for 5 minutes. Pour off the supernatant fluid. Wash the precipitate three times with distilled water, recovering the precipitate by means of centrifugalization. Add to sediment 1 c.c. distilled water and transfer to a vitreosil crucible. The test-tube is washed with distilled water and the washings also collected in the crucible. The water is slowly evaporated, and the precipitate burnt in a strong flame until CaO is formed. Dissolve the ash in ½ c.c. N/50 HCl, add 1 c.c. distilled water and titrate excess of HCl with N/100 NaOH, using phenolphthalein as an indicator. The amount of CaO can now be calculated.

Eight analyses may be made by this method in one hour. Remarkably uniform results are obtained upon repeated examinations of the same blood. For clinical purposes, this method is of great assistance.

100 (1682)

The penetration of normal mucous membranes of the rabbit by Treponema pallidum.

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The fact may be recorded that highly virulent strains of *Treponema pallidum* are capable of penetrating some portion of the genital mucosa of normal rabbits and setting up an infection without necessarily producing the first gross lesion at the portal of entry. This fact was recently determined in 9 rabbits and with two highly virulent strains of *Treponema pallidum*.

The experimental method employed was as follows:
The sheath of the animal was drawn forward to form a pouch into which was instilled 0.05 c.c. of a testicular emulsion rich in spirochetes. About 30 seconds were allowed for the emulsion to spread before releasing the sheath. Most of the fluid then ran out and between 0.04 and 0.05 c.c. could be recovered showing that only a thin film of the emulsion was retained. Infection was first indicated by enlargement and induration of the inguinal lymphnodes and later by the development of a general lymphadenitis with syphilitic lesions in other parts of the body.

All animals thus far inoculated by this method have become infected. In some of them, enlargement and induration of the inguinal nodes was clearly recognizable within 24 hours after the application of the emulsion. Thus far (5 weeks) only one of the animals has developed a visible lesion on either the penis or the sheath, although several of them have characteristic lesions in the testicles and scrotum.

The observations on these animals are not yet complete and the full significance of the experiments cannot be ascertained until the course of the infection has been followed much longer. Similar experiments with other mucous membranes are in progress.

101 (1683)

Neoplasia in experimental syphilis.

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Neoplasia as a sequel to syphilitic infection is not uncommon in man but has never been recorded in an experimental animal. Recently, we have observed an atypical growth arising from the scar of an old syphilitic lesion in the scrotum of a rabbit which may prove to be a neoplasm.

The animal was inoculated in the scrotum, June 16, 1916. Small chancres developed and then underwent spontaneous regression. Several months later, there was a recurrence and the lesion in the left scrotum persisted for some time. In October, 1920, there was a slight diffuse infiltration of the left scrotum