

Cytomegalovirus Vaccine

Drs. Stephen D. Elek and Harold Stern of St. George's Hospital in London have developed a vaccine against cytomegalovirus, the most common agent of congenital viral infection and an important cause of mental retardation. The experimental vaccine, which produced antibodies persisting for up to 12 months in 25 of 26 volunteers, is expected to undergo extensive trials within a year.

The ubiquitous organism, a member of the herpes virus family, infects most individuals during their lifetime; it was first isolated in 1957 by Dr. Thomas H.

Weller and associates at Harvard. About one percent of neonates are born with active cytomegalovirus infections and although the majority are asymptomatic, five to 15 percent have central nervous system abnormalities. Clinical findings in affected infants include low birth weight, microcephaly, jaundice, petechiae, retarded development, hepatosplenomegaly and deafness.

The virus can cross the placenta but how it is spread among adults has not yet been determined. A disproportionate rate of infection is found among first born neonates of young mothers, particularly those who are poor and black.

Drs. Marian E. Melish and James B. Henshaw recently reported a follow-up study at the University of Rochester of 22 children whose infection was discovered by virologic or serologic methods. Only one infant had symptoms classically associated with congenital cytomegalovirus infection at birth; another, who had no neonatal abnormalities, except that he was small for gestational age, at four years was microcephalic and severely retarded. A third child was slow in development; a fourth may have minimal brain damage and a fifth had moderately severe sensorineural hearing loss.

MD REMEMBERS: A Renaissance Anatomist

Gabriele Fallopio (Fallopian), whose 450th anniversary is this year, is known throughout the world for describing the inguinal ligament, temporal bone aqueduct and uterine tube that bear his name, but less familiar is the paradox in his career. He abandoned his early practice of surgery because he showed so little aptitude in the subject and then became one of the greatest Renaissance dissectors and professor of anatomy and surgery at Padua. Some medical historians have ranked him on a par with Vesalius.

A native of Modena in north central Italy, Fallopius had a classic education and was considering entering the Church after his father died and left the family in straitened circumstances. With an improvement in his finances he turned to medicine and became a student of Niccolo Machella in his home town. There in 1544 Fallopius obtained permission to dissect a female criminal who had been hanged. After practicing surgery unsuccessfully for a brief period, he may have studied in Padua with Matteo Realdo Colombo, but about 1458 it is known that he was a pupil of Antonio Musa Brasavola and Giovanni Battista Canano in Ferrara.

For a short time Fallopius taught pharmacy in Ferrara before he accepted the chair of anatomy at the University of Pisa. During his tenure he dissected lion cadavers in

the Medicis' Florentine zoo and disproved Aristotle's statement that leonine bones were completely solid and devoid of marrow.

Despite false charges that he had practiced vivisection at Pisa, Fallopius was appointed professor of anatomy and surgery and superintendent of the botanic gardens in



Anatomist Gabriele Fallopius

Padua in 1551. His lectures and demonstrations soon attracted a number of students including Volcher Coiter of Groningen and the noted surgeon-anatomist Fabricius d'Aquapendente.

Observationes anatomicae, published in 1561, the year before Fallopius died of tuberculosis, presented the first clear description of primary dentition, the three mus-

cular coats of the urinary bladder and the fine details of the auditory apparatus. He identified the portal anastomosis of the liver, the venous sinuses of the spinal canal and cranial cavity, and denied the old theory that the direction of fibers in vascular walls controlled the flow of blood.

He suggested that renal papillae distilled urine from the blood, and stated that the bladder's internal sphincter was "formed by nature to contain the urine and prevent its being strained out." Fallopius coined the word "vagina," described the clitoris, settled an old dispute concerning the hymen by asserting its existence in virgins, and compared the uterine tubes to the curling tendrils of a vine. He noted that if the tubes' endings "be opened carefully and spread apart, they form, as it were, the bell-like mouth of a bronze trumpet."

The unillustrated *Observationes* was not intended to be an anatomy textbook but a series of commentaries and additions to the *Fabrica*, whose author Fallopius referred to as "the divine Vesalius." There are no records indicating that the two men ever met but when the great master received Fallopius' book he wrote from Madrid that putting everything else on one side he gave himself wholly to the instant greedy reading of the pages which brought back vividly the delights of his youth.