of course, an old standby — a suspension that over the years has had relatively uniform action. The same cannot be said of NPH.

Supporters of this thesis will be pleased to learn that E.R. Squibb and Sons Ltd. have recently decided to provide globin zinc insulin, 100 U/ml, in Canada.

GUY E. JORON, MD
3830 Lacombe Ave.
Montreal, PQ

References

1. REINER L, SEARLE DS, LANG EH: Insulin preparations with prolonged activity: globin insulin. *Proc Soc Exp Biol Med* 40: 171, 1939
2. RABINOWITCH IM, FOWLER AF, BENSLEY EH, et al: Globin insulin. *Can Med Assoc J* 56: 595, 1947

Postpartum infection with meningococcemia

To the editor: Attention has been drawn to the possibility of pathogenic *Neisseria* causing disease from unexpected body sites.[1] The following is a case of meningococcemia associated with postpartum infection.

A 21-year-old woman, para 1, gravida I, came to the emergency department complaining of chills and fever 10 days after an uncomplicated vaginal delivery of a healthy baby boy. Physical examination revealed diffuse and extensive pelvic tenderness without purulent discharge from the cervix, a temperature of 39.8°C and a pulse rate of 115 beats/min. The patient was admitted with a provisional diagnosis of postpartum sepsis.

The peripheral leukocyte count was 31.8 x $10^9/l$ (60% neutrophils, 27% bands). Gram-stained smears prepared from urine, cervix, vagina and episiotomy site provided no additional information. Two samples of blood were drawn for culture and the patient then received 4 million U of penicillin intravenously every 6 hours and 500 mg of kanamycin intravenously every 12 hours. Within 24 hours improvement was observed and her temperature decreased to 37°C. The patient remained on this regimen for 4 days, then refused further intravenous therapy. Penicillin and kanamycin were replaced by ampicillin, 500 mg taken orally every 6 hours. On the 5th hospital day she discharged herself, leaving with enough ampicillin to complete a 10-day course.

The two sets of blood cultures grew gram-negative diplococci in aerobic tubes after 5 days' incubation. Subsequently this organism was found to be oxidase-positive and to ferment both maltose and dextrose; it was identified as *Neisseria meningitidis*, group C by immunodiffusion and counterimmunoelectrophoresis. All other cultures were negative for *N. meningitidis*.

The clinical features in this patient were consistent with those of classic postpartum infection, with isolation of an etiologic agent from blood. Rash, meningitis or nasopharyngitis, which might have suggested *N. meningitidis* infection, was not present. Cervical culture did not yield *N. meningitidis*, but isolation of this organism from the genitourinary tract has been reported in seven patients with cervicitis or urethritis, although no systemic manifestations were recorded.[2] Keys, Hecht and Chow[3] reported two cases of fever, rash and joint involvement in which *N. meningitidis* was isolated from the endocervix. In one case the organism was recovered from blood and joint fluid. Pelvic infection was not a clinical feature of either case.

Feldman[1] has drawn attention to new patterns of gonococcal disease that are emerging with the increasing prevalence of gonorrhea and has suggested that the meningococcus is retaining its classic disease patterns. The association with postpartum infection is new for *N. meningitidis* and, furthermore, provides a rationale for the treatment of asymptomatic genital carriage of the organism, particularly in the pregnant patient.

We are indebted to Dr. C. Krishnan, The Hospital for Sick Children, Toronto, for serotyping *N. meningitidis*.

JOHN R. MORGAN, PH D
JACK FEDDER, MD, FACOG, FRCS[C]
JOHN A. SMITH, MD, FRCP[C]
Mount Sinai Hospital
Toronto, ON

References

1. FELDMAN HA: Meningococcus and gonococcus never the twain . . . well hardly ever. *N Engl J Med* 285: 518, 1971
2. CARPENTER CM, CHARLES R: Isolation of meningococcus from the genitourinary tract of seven patients. *Am J Public Health* 32: 640, 1942
3. KEYS TF, HECHT RH, CHOW AW: Endocervical N. meningitidis with meningococcaemia. *N Engl J Med* 285: 505, 1971

Standardization of tuberculin testing material

To the editor: For many years a variety of materials have been available for tuberculin testing, including Old tuberculin of various strengths, patch tests, multiple puncture tests and, most recently, purified protein derivative of Old tuberculin (PPD). Consequently, results of epidemiologic studies and clinical interpretations have been varied and unreliable.

In 1966, largely as a result of the work of Landi and colleagues,[1] it was recognized that PPD solutions could lose up to 50% of their potency by adsorption of tuberculoprotein to the glass or plastic containers and syringes, and that this could be prevented by stabilization with polysorbate (Tween) 80, as had been done by Connaught Laboratories in Toronto for some years.

At the request of the standards committee of the Canadian Thoracic Society a conference was held in Toronto attended by the leading authorities on the subject in Canada and the United States. Standardization of PPD at a strength bioequivalent to the stabilized standard PPD-S (5 tuberculin units [TU]), prepared at the Center for Disease Control, Atlanta, Georgia, was agreed to by the US authorities and by the minister of national health and welfare of Canada. Suitable labelling of the containers has been approved.

The strength of the stabilized products issued by Connaught Laboratories, because it was not reduced by glass adsorption, had been approximately twice that of the standard solution used by the US Public Health Service. Now that the standard solutions used in the two countries are exactly comparable, results of previous epidemiologic surveys and standards of interpretation of skin testing remain valid.

The Canadian Thoracic Society strongly recommends that tuberculin material for intradermal testing be a stabilized product bioequivalent to 5 TU of PPD (PPD-S). The correct interpretation of such a tuberculin test, read at 48 to 72 hours, is as follows:

- 10 mm induration or more = positive.
- 5 to 9 mm induration = doubtful.
- 0 to 4 mm induration = negative.

The use of solutions of 1, 10 or 250 TU in strength has little clinical or epidemiologic value except in certain circumstances. In future all dose strengths will refer to the stabilized solution, bioequivalent to PPD-S. The standards committee is now urging Health and Welfare Canada to approve exactly comparable standards for testing material for other mycobacteria, such as Battey bacilli.

OWEN CLARKE, MD
Chairman, standards committee
Canadian Thoracic Society
343 O'Connor St.
Ottawa, ON

Reference

1. LANDI S, HELD HR, HAUSCHILD AH, et al: Adsorption of tuberculin PPD to glass and plastic surfaces. *Bull WHO* 35: 593, 1966

XYY phenotype; does it exist?

To the editor: During the last year the group called Science for People succeeded in blocking and finally stopping at Harvard the survey of chromosomal errors in newborns. The discussion following this action appeared in several major scientific and medical journals and concerned the XYY phenotype.

All chromosomal aberrations produce a wide range of severity of clinical symptoms. This is especially true of aberrations with extra or miss-