

is suitable for the administration of oxygen or inhalation medicants.

The sizes of the tubes are constructed in conformity with the standard sizes of the regulation tracheostomy tubes.

Manufacturers of equipment described in this column can be obtained by writing to the Journal Office.

CASE REPORT

Thrombophlebitis with Promethazine

Dr. Arnold M. Sobel, Fort Campbell, Kentucky, reports a case of thrombophlebitis caused by the intravenous injection of promethazine. The patient, a 34 year old physician, received as premedication 100 mg. of pentobarbital orally ninety minutes preoperatively and 10 mg. of morphine sulfate intramuscularly sixty minutes preoperatively. The patient was still apprehensive when he arrived in the operating room. A hypobaric subarachnoid block with 10 mg. of tetracaine in 10 ml. of distilled water was uneventfully administered and produced analgesia at the tenth thoracic level in 18 minutes. The foot was prepared surgically ten minutes after the block was initiated, and the vague sensation of this increased the patient's apprehension. At this time 12½ mg. of promethazine (½ ml.) was injected into the rubber sleeve of an intravenous infusion set immediately above the no. 20 gauge needle that was conducting a solution of 5 per cent dextrose in water into a vein on the dorsum of his right hand at a rate of 40 drops per minute. He immediately complained of a searing pain from the site of the needle up to the elbow. After five minutes the pain still persisted, so 4 ml. of a 1 per cent lidocaine solution was injected slowly by the same route. This succeeded in reducing the pain to a moderate intensity which was bearable for the patient. Twelve minutes later the dose of promethazine was repeated by the same route to produce more sedation. Again the severe pain radiated up the arm. The pain persisted until eight minutes later when the patient fell soundly asleep, his vital signs remaining normal. Later that same day, after the intravenous infusion had been discontin-

ued, the vein was noted to be slightly tender. One week later examination revealed the vein to be thrombosed from the site where the needle had been to just above the wrist, a length of four inches. It was not inflamed or tender at this time.

Promethazine is frequently used in similar fashion to augment sedation or tranquilization in patients who have been given regional anesthetics or in young vigorous patients who require large amounts of injected fixed anesthetics as part of general anesthesia. The presence of pain on intravenous injection of promethazine in patients who are awake has been noted several times, but this pain has, till this case, in my experience, always been transient, lasting not longer than four minutes and decreasing in intensity over this period of time. A review of the literature revealed no report of venous thrombosis with promethazine. One case of venous thrombosis with chlorpromazine was noted in the foreign literature.

Each milliliter of promethazine (25 mg./ml.) solution for injection contains 3.6 mg. of sodium citrate, 0.75 mg. of citric acid, 0.05 mg. of thiomersal, and 1.0 mg. of sodium formaldehyde sulfoxylate ($\text{H}_2\text{C}(\text{OH})\text{SO}_2\text{Na}$). The citric acid and citrate are benign in their local action when injected intravenously. Thiomersal (Merthiolate) is frequently used as a preservative for injectables; and though local skin reactions occur occasionally with its topical use in concentrated form, no reactions have been reported with its use in parenteral medications. Sodium formaldehyde sulfoxylate has been tried as an antidote for mercury poisoning, and no reactions have been reported when injected intravenously in larger amounts for this purpose. It is believed that the venous thrombosis was not caused by the vehicle.

Communication with the manufacturer revealed the possibility of venous thrombosis with a direct injection of 50 mg. of promethazine in one milliliter, but no record of a similar case with a lesser dose. The manufacturer advises against the use of the 50 mg./ml. concentration for direct intravenous injection. For the comfort of the patient and to avoid the possibility of a localized venous thrombosis it is probable that promethazine (even in the 25

mg./ml.-concentration) should be given in fractional doses and diluted before direct intravenous injection.

CORRESPONDENCE

"Nothria"

To the Editor.—May I briefly refer you to an article entitled "Changing Concepts Concerning Depth of Anesthesia" by Philip D. Woodbridge (ANESTHESIOLOGY, 18: 536, 1957). You will note that Dr. Woodbridge suggests a semantic need for the word "nothria." It's stated therein that the meaning of the word as translated from the Greek is mental and motor inactivity with insensibility, or a state of torpor.

Recently, at a meeting of the American Board of Obstetrics and Gynecology, one of the semanticists, in discussing their relations with anesthesiologists, suggested that perhaps the word nothria might be used. A professor of English literature was asked to furnish a definition and to trace the origin of the word. The following paragraph is the information obtained.

Nothria = From Greek "nothros" found in a Greek epic poem describing the look on the face of a girl after intercourse. Noun = Nothria, defined as "post-coital languor." Adjective = Nothrotic. Compare this with Greek "necoss" and with English noun "necrosis" and adjective "necrotic."

It will appear obvious that while there may be some merit to this definition of the word nothria, I feel that the look upon the faces of a nothrologist administering anesthesia is not the same as described in the preceding paragraph.

JOHN W. DITZLER, M.D.
Detroit, Michigan

To the Editor.—Since my other letter, concerning nothria, I have done some research on the word. I am enclosing a letter which I have just received from Dr. Arthur King. It would appear, therefore, that the original sexual application of the word "nothria" is correct as quoted from Greek literature, but that it is not necessarily the original meaning nor the only meaning possible. I believe, how-

ever, that in order not to permit Dr. Woodbridge's definition to stand as the sole basis for any future consideration by anesthesiologists, it would be worth printing some of this correspondence since I find that I would be equally displeased being called a nothrotist, if I felt that it were to apply either to the state of languor previously referred to, or to the state which Dr. King quotes in his letter; namely, "someone who is stupid, boring, lazy, sluggish and half asleep."

Dear Dr. Ditzler: In answer to your letter, in regard to "nothria," I have had two discussions with Mr. James Vail of the Classics Department of The University of Cincinnati.

He informed me first that the definition (nothria—post-coital languor) he gave me over the telephone was the result of his most recent meeting of the word in the ancient Greek literature, a poem attributed to Discorides in the Palatine Anthology (Loeb Classical Library), Book V, Poem 54 (or 56 in some editions).

Since then he has given me the following renderings from Liddel-Scott-Jones' "A Greek-English Lexicon"—

<i>nothra</i>	(nothia)	Slowness, sluggishness
<i>nothros</i>	(nothes)	Sluggish, slothful
<i>nothrosos</i>	(nothrusus)	Frigidus in cerebrom
<i>nothrotis</i>	(nothria)	Sluggishness, torpor, indolence
<i>nothros</i>	(nothros)	Leisurely, gradually
<i>nothrotis</i>	(nothrotis)	same as nothria

He refers to the above as "The pertinent cluster of words" and adds: "Do not blame me for any idea concerning a specific sexual application of the word. The passage I quoted over the phone had to do with a girl who had a languid look in her eyes. The poem tells us why, but all that is not relevant to philology." And later, "The word seems to be negative in flavor. We literary people do not worry about that, but for purely historical purposes the negative or undesirable flavor must be admitted to predominate."

I recently asked a modern Greek doctor with an excellent general education if the Greeks currently used the word "nothria" or "nothros." His reply was interesting: "Yes, we apply it to someone who is stupid, boring, lazy, sluggish, or half-asleep all the time—a dull fellow." He had not heard of the sexual connotation, but admitted the possibility of its poetic use in that connection. He intimated the current use of the word was too insulting to apply to a pleasurable act or its aftermath.

Trusting that this will help clear the problem of translation and connotation, I remain, ARTHUR G. KING, M.D., Cincinnati, Ohio.

JOHN W. DITZLER, M.D.
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