

ABSTRACTS

Editorial Comment: A fixed style of presentation for this department of ANESTHESIOLOGY has purposely not been defined. It is the wish of the Editorial Board to provide our readers with the type of abstract they desire. Correspondence is invited offering suggestions in regard to the length of abstracts, character of them, and source of them. The Board will appreciate the cooperation of the membership of the Society in submitting abstracts of outstanding articles to be considered for publication.

FRASER, C. K., AND JONES, J. W.: *Paraldehyde Analgesia and Perineal Anesthesia in Obstetrics*. *Am. J. Obst. & Gynec.* 40: 506-509 (Sept.) 1940.

"The purpose of this paper is to present our clinical observations based on personal experiences in the use of paraldehyde analgesia with perineal anesthesia in terminating the second stage of labor. We have also incorporated a series with complications of pregnancy and parturition in which other forms of analgesia were employed, but the delivery was accomplished with perineal anesthesia. . . . We have used a combination of nerve block and local infiltration. The patient is prepared and draped for delivery. The pubic arch and ischial tuberosities are palpated for orientation. A point on the skin midway between the rectum and ischial tuberosity is selected for the entrance of the needle. . . . If a perineotomy is to be done, the injection is made first on that side, for the action of the drug is more complete at the point of incision. A 22 gauge needle, 10 cm. in length, is inserted at the selected area and directed just medial to the ischial tuberosity. With one finger in the vagina, the point of the needle is guided posterior to the ischial spine, care being taken not to pierce the vaginal wall. The needle is brought to rest proximally and posterior to the ischial spine. Traction is made on the plunger and if

blood is not aspirated, 10 cc. of a 1 percent. solution of procaine hydrochloride is injected. By withdrawing the needle 2 or 3 cm., some of the solution is deposited beneath Colles fascia where . . . the anatomic arrangement of the fascia does not allow the solution to escape save anteriorly where it will bathe the terminal branches of the pudendal nerve anterior to the triangular ligament. The needle is then withdrawn until the point is just beneath the skin. It is then inserted so as to infiltrate beneath the cutaneous and mucosal surfaces at the site of the perineotomy, and 10 cc. of the solution is injected. The procedure is then repeated on the opposite side, omitting the local infiltration for incision. By this method 50 to 60 cc. of the anesthetic solution is adequate. As one becomes skilled in placing the solution it will be found that smaller amounts are required. . . .

"We feel that paraldehyde analgesia with perineal anesthesia has yielded satisfactory results in our hands. It is our clinical observation that intra- and postpartum hemorrhage is decreased with this method. In one case a retroplacental hematoma necessitated administration of parenteral fluids. The uterus reacted well following completion of the third stage. The immediate puerperium has been encouraging. . . . No case required catheterization. There was no morbidity. All patients tolerated regular diets following parturi-

tion. The relative cost of paraldehyde analgesia and perineal anesthesia in our hands is approximately 9 to 11 cents per delivery, a financial factor of some importance in many institutions. We agree with Greenhill that this method should not be used in the presence of local inflammation or in nervous, high-strung individuals. The contraindications for general anesthesia in obstetrics are the indications for perineal anesthesia. This is well exemplified . . . where forms of analgesia other than paraldehyde were used, but all cases were terminated with perineal anesthesia."

J. C. M. C.

HEIDRICK, A. F.; ADAMS, W. E., AND LIVINGSTONE, H. M.: *Spontaneous Pneumothorax Following Positive Pressure Intratracheal Anesthesia*. Archives Surg. 41: 61-65 (July) 1940.

Since the introduction of intratracheal anesthesia by Elsberg in 1909, this method has increased in popularity, especially in thoracic surgery. Elsberg mentioned the difficulty in determining the size of the catheter to produce the desired distention in the lung. The determining factor is the freedom of outflow around the catheter.

There is no agreement as to the amount of positive pressure which may be safely used. Coryllos, using an E and J Resuscitator upon humans and dogs, concluded that no trauma to the lungs occurred with pressures varying from plus 14 mm. to minus 9 mm. of mercury. He states that in order to rupture the lung of a dog, a positive pressure of 52-58 mm. of mercury is needed. In a study on cats, Macklin found that positive pressure intratracheally could produce mediastinal emphysema, pneumothorax, and subcutaneous emphysema. With relatively small catheters, it was more difficult to produce a pneumothorax.

Eisenbrey showed a wide variation between the pressure registered on the apparatus and that existing in the trachea. With a free outflow between the trachea and catheter, only 1-2 mm. of mercury pressure was produced with a machine pressure of 20-50 mm. of mercury. Stoppage of the outflow immediately raised the intratracheal pressure to a dangerous level.

Bradshaw reports subcutaneous emphysema and pneumothorax in a baby (18 mos.) following intratracheal anesthesia; later an uneventful mask anesthesia was given and the operation performed, which was the removal of a large intrathoracic neurofibroma.

In 1936 Stephens reported three cases of contralateral pneumothorax complicating intrathoracic surgical treatment. Subcutaneous emphysema and mediastinal emphysema were present in one case. Positive pressure through the mask was used in two of these cases.

We wish to report a case of spontaneous pneumothorax following positive pressure intratracheal anesthesia. A 19 year old woman was being operated upon for relief of pain in the hand. A preganglionic sympathectomy in the upper part of the thoracic region was done. Anesthesia was produced by intratracheal administration of ether and oxygen after an ethylene oxygen induction. A no. 8 Magill tube was introduced through the nose and into the trachea easily under direct vision. Anesthesia was maintained by the semi-open method and later manual pressure was used on the bag when a hole was made in the pleura. A positive pressure of 12 mm. (Hg) was maintained. Just before closure of the chest, oxygen was given through a machine and the lung seemed to expand well. Blood pressure, pulse, and respirations show no marked variation during the operation.

Postoperatively, the patient com-