

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.

DREISBACH, R., AND SNYDER, F. F.:
Effect of Scopolamine on the Fetus.
Proc. Soc. Exper. Biol. & Med. 48:
197 (Oct.) 1941.

Experiments were designed to study the effect of scopolamine alone on the fetus. Cat fetuses were observed as the abdominal wall and uterus were opened, permitting the unborn to float in a bath of Ringer's solution. The placental circulation, of course, was kept undisturbed by this technic. Dosage of the drug was from 10 to 150 mg. per kilogram administered intravenously into the maternal animal. Depression of activity was noted in non-pregnant animals after a dosage of scopolamine of 0.25 mg. per kilogram.

The outstanding result was the persistence of marked activity of the fetuses despite administration of large doses to the mother. In several fetuses direct injection of scopolamine into the umbilical vein resulted in no marked depression of fetal activity. The fetuses survived following delivery and acted as normally as the controls. The presence of the drug in the fetus was demonstrated by testing samples of fetal urine.

There also appeared to be no effect on the labor mechanism, for instead of hysterectomy, some maternal animals were allowed to deliver spontaneously under the influence of scopolamine. Our conclusion is therefore that in cats at least scopolamine even in large doses causes no evident fetal injury.

R. D. D.

FINE, JACOB, AND SEARS, JOHN B.: *The Prophylaxis of Pulmonary Embolism by Division of the Femoral Vein.*
Ann. Surg. 114: 801 (Nov.) 1941.

"The purpose of this communication is to offer evidence that division of the femoral vein is advisable as a routine prophylactic measure against pulmonary embolism when thrombosis of the deep veins of the lower leg is present or suspected."

The site of origin of the embolus is not usually in the iliac or pelvic veins. In 133 cases of venous thrombosis, Frykholm showed the site to be below the entrance of the deep femoral in 85 per cent. The work of Neuman, Roessle and Barker is also cited to substantiate the fact that ". . . the deep veins of the lower leg must be regarded by far the most common site of origin of venous thrombosis."

The site of ligation suggested is just below the entrance of the deep femoral. The internal saphenous and deep femoral remain as adequate pathways for return flow of blood. No proximal segment of vein is left with a sluggish stream. The exposure permits inspection of the deep femoral and division of this also, if it contains a thrombus.

The use of intravenous heparin seems to be effective, but it is too expensive and too much of a burden on the patient to permit routine postoperative use. Careful and repeated examination of the lower legs for the earliest manifestations of thrombosis is advised. The symptoms are: pain and tender-

ness in the sole of the foot, ankle or calf. The signs are: (1) pain on dorsiflexion of the foot, (2) fever, (3) increased local heat, (4) edema and induration, (5) fullness of the superficial veins, (6) slight cyanosis.

Venograms taken after the injection of Diodrast into the small saphenous vein at the ankle may be of help in patients who have had a non-fatal pulmonary embolus, but have not shown any localizing signs of phlebitis. Venography will enable one to determine which leg is involved, and therefore on which side ligation should be performed. Venography may also reveal the extent of involvement and serve as a guide to the level for effective prophylactic ligation.

Cases are cited to show the danger of delaying immediate intervention when the signs of thrombosis first appear. Also reviewed are the histories of patients in whom ligation was performed following the occurrence of non-fatal pulmonary emboli, and who subsequently made uneventful recoveries. Further cases are cited to show that ligation of the popliteal is not satisfactory because when thrombosis exists in the deep leg veins, it frequently extends beyond the popliteal; and ligation of the popliteal leaves a sluggish stream in the remaining proximal segment. 19 references.

R. B. B.

CASSELLS, W. H.: *Cessation of Respiratory Exchange*. Arch. Surg. 43: 568 (Oct.) 1941.

"The term cessation of respiratory exchange is used here to refer to complete interruption of the flow of air into and out of the lungs."

"The purpose of this paper is to emphasize that cessation of respiration need not be fatal, provided it is promptly recognized, quickly investigated and judiciously treated."

"Respiratory exchange is a mechanical function and interference with it should be considered a mechanical problem and treated by mechanical means."

Types of cessation of respiratory exchange: 1. *Cessation of respiratory effort without obstruction*. This condition may be caused by (a) paralysis of the muscles of respiration, (b) excessive elimination of CO₂, (c) reflex inhibition as from stimulation of the carotid sinus, (d) paralysis of the respiratory center due to intracranial lesions, overdose of drugs or acute oxygen want. The immediate treatment is establishment of efficient artificial respiration. 2. *Obstruction to respiration without cessation of respiratory effort*. "The abdomen expands at the expense of the chest." This type is simulated by the paradoxical "rocking boat" type of respiration due to intercostal paralysis. The causes are numerous. A few examples are cited: (a) relaxation of the muscles of the jaw may permit the tongue to fall back against the posterior wall of the pharynx, (b) foreign bodies in the throat, larynx or trachea, (c) laryngospasm caused by local or reflex stimulation, (d) tumors or edema encroaching on respiratory passage, (e) external pressure on chest or neck. The treatment is to remove the cause if possible by insertion of pharyngeal airway, suction, instrumentation or manipulation of foreign bodies; insertion of endotracheal tube, and in some cases, tracheotomy. 3. *Cessation of respiratory effort and obstruction to respiration*. This condition is characterized by absence of respiratory movements and failure of artificial respiration to produce respiratory exchange. The most common causes are acute oxygen want following obstruction and pharyngeal relaxation due to oxygen want which causes paralysis of respiratory center. The treatment is to remove the