scopic drainage should be instituted without delay." 26 references.

A. W. F.

KRIEG, E. G.: *Control of Postoperative Pain. Application of Cold to the Operative Site.* Am. J. Surg. **62**: 114–116 (Oct.) 1943.

". . . The aim of this procedure has been the substitution of cold for narcotic drugs either in whole or in part. Our initial experience involved a patient who required appendectomy and who was violently allergic to all opium derivatives. Her postoperative pain was entirely controlled by the application of ice caps. . . .

"The temperature induced by the application of bare ice caps is approximately 6° C. There has been no evidence of any interference with wound healing in any of our cases."

"The efficacy of the ice cap is attested to by the reduction in the amount and the type of narcotic actually required. After preliminary experience it was found that codeine sulphate in 1 grain dosage was sufficient to control the residual pain in all except the occasional individual. In this series 20 per cent of the adults and 70 per cent of the children required no narcotic. . . .

"Coincident with the reduction in the amounts of narcotic administered there has been an abrupt fall in the complication attributed to anesthesia and/or operation."

"The method is simple. . . . The dressing consists of a double thickness of cellophane sealed to the skin by wide strips of adhesive tape thus providing a water-proof dressing of good conductivity . . . the cellophane should be of the thickness of that commonly used for oxygen tents and the handling is best accomplished by wrapping in cloth as a flat package which is sterilized in the autoclave."

"The second part consists of one or more ice caps without the usual flannel jacket. The bare cap is placed directly upon the cellophane immediately after operation. In order to be effective the cold must be applied for at least one half hour. The contents of the cap must be renewed as frequently as the ice disappears because ice water is not effective. . . . The ice must be replaced from one to three hours. In the average case the ice cap may be discarded after the second day. 5 references.

A. W. F.

MURPHY, F. C., AND POSTLETHWAIT, R. W.: *Novocain Injection for Minor Injuries in the Military Service.* Surg., Gynec. & Obst. **77**: 397–402 (Oct.) 1943.

"During the year 1942, it was necessary to admit to the hospital 55 patients with acute strain or spasm of the knee, ankle, or back. The average duration of hospitalization for these patients was 10.3 days. Since novocain injection has been used for these injuries, we have admitted only one patient with severe traumatic synovitis of the knee for 48 hours."

". . . Based on our observations of the symptoms and signs in these injuries, we believe the effect of novocain injection to be due to two principal factors: first, the immediate decrease of muscle spasm, and second, the delayed but important correction of local anoxia."

Before proceeding with the injection, all patients are examined clinically and roentgenologically. The patient is placed in the recumbent position. . . . The most tender points in the injured area are then identified and marked with gentian violet and the skin prepared with tincture of merthiolate or iodine. . . . Sterility must be scrupulously maintained. . . . A wheal is then raised with 1 per cent nococain . . . a 1½" 21 gauge needle

is then introduced to the bone and a hematoma is searched for. If a hematoma can be found, and injected with novocain an excellent result may be expected. When no hematoma can be located, the area in general is infiltrated. Immediately after the injection, the area is lightly massaged to aid diffusion. Active motion of the part is then insisted upon. . . . The result is a relaxation of the surrounding muscles, relief of pain, and a rapid return of normal function. If the joint involved is a weight bearing or carrying joint, an adhesive strapping or tight muscle bandage is applied. . . . If favorable results are not obtained after 2 or 3 injections, further injections are not indicated. (1 per cent novocain is used and in amounts usually of 5 to 10 cc.) Typical case histories and a statistical study are presented." 10 references.

A. W. F.

MOERSCH, H. J.: *Bronchoscopy in the Treatment of Postoperative Atelectasis.* Editorial, Surg., Gynec. & Obst. 77: 435–437 (Oct.) 1943.

"The value of bronchoscopy in the diagnosis and treatment of pulmonary disease is widely recognized. Its value in the prevention and treatment of postoperative pulmonary complications is not so well known. Pulmonary complications following operation are a constant source of anxiety to the surgeon and that such anxiety is warranted is emphasized in the studies of Scott and of Lewis. From statistics compiled from all parts of the world in which modern surgical methods prevail, these observers have estimated that some type of pulmonary complication develops in approximately 2 per cent of all operations and that one out of every 200 operations results fatally from this cause. Most observers are of the opinion that atelectasis is the most frequent type of pulmonary complication following operation, and that it is only when the atelectatic lung becomes secondarily infected that true bronchopneumonia occurs."

"Many hypotheses have been advanced to explain the etiological factors involved in the production of postoperative atelectasis. The most widely accepted hypothesis is that postoperative atelectasis is produced by an obstruction of the bronchus by a plug of thick, tenacious mucus. Lee and Tucker in 1925 were the first to demonstrate this bronchoscopically, and they showed furthermore that atelectasis could be relieved by removal of the obstructive mucous plug."

"Atelectasis may occur as a complication following any operation, but it is more likely to occur in operations on the upper part of the abdomen and on the thorax than elsewhere in the body. This is to be anticipated because operations on the upper part of the abdomen and the thorax are prone to lead to the greatest interference with the normal respiratory movements and the effectiveness of the cough reflex. Atelectasis is estimated to occur in 10 per cent of cases in which operation is performed on the upper part of the abdomen and the thorax, in contrast to 3 per cent of cases in which the lower part of the abdomen is the site of operation. It occurs very rarely following operations on the extremities. Postoperative atelectasis is more likely to develop among patients suffering from bronchiectasis, infection of the upper part of the respiratory tract, or any other disability which leads to excessive accumulation of secretion in the mouth during the course of anesthesia than among normal, healthy persons. The length of time required to perform the operation, the type of premedication, the character of the anesthetic agent, and the ease of induction of anesthesia are also important etiological factors in the development of atelectasis. The position of the patient during operation also has been demonstrated to be