or of ether vapor precludes the use of cautery or diathermy in transthoracic gastrectomy. Pentothal, curare and nitrous oxide-oxygen have been used. An amazingly small amount of sodium pentothal is required and the patient is ready to wake up at the end of the operative procedure. The anesthetist must watch the operation closely in order to conduct the anesthesia and manage the physiology of the patient. At the end of the operation the patient’s lungs must be filled with helium or nitrogen and adequate oxygen, and kept expanded during closure of the chest. This final expansion is one means of avoiding atelectasis.

F. A. M.


The use of coca by the Incas was widespread. The plant held an important place in their civilization and religion. Although the origin of the Incas is unknown it is possible that coca was brought into their civilization by one of the races which they conquered. Coca, like all other things which were thought to be capable of giving life, was an object of worship. Coca was incorporated into the religious ceremonies and was reserved for priests and a few others such as soldiers. After being conquered by the Spaniards the Indians were forced to work in mines on meagre rations. They chewed coca leaves to relieve their fatigue and satiate their appetites. The Spaniards soon recognized the need of the Indian for coca and its value as a source of revenue.

In modern times the Indians of the Bolivian plateau throw coca into the air to propitiate the gods. The porters traveling all day at a rapid rate with heavy loads chew coca leaves constantly or pause every forty minutes to take a fresh supply. The leaves and an alkaline substance are kept in the cheek.

These Indians may live to be a hundred years old and their endurance to fatigue is phenomenal. They often go for three or four days without hunger or fatigue while working constantly and may go eight or ten days without sleep as long as they have coca. Other uses to which coca is put are, chewing with tobacco to produce intoxication, as a gift at death ceremonies, as a dessert at reunions and as a carminative and treatment of diarrhea.

Coca culture was developed to a high state during the Incan age. It is now grown on the Eastern slope of the Andes. The amount of alkaloid in the leaves increases with the age of the plant, reaching the peak when the plants are ten years old. Three to five harvests are made each year. The leaves are dried, baled and transported to coastal towns for shipment. The Spaniards studied the drug but early investigators considered it to be either inert or a mild stimulant like tea.

After Niemann, in 1860, isolated an alkaloid which he called cocaine, Schropp and Demarle observed that it produced analgesia of the tongue. Karl Koller, working with Freud in Vienna, in 1884, confirmed the numbing effect of cocaine on the tongue. He reasoned that if it was capable of paralyzing nerve-endings in the tongue cocaine could also be expected to paralyze the nerves in the cornea and conjunctiva. He conducted experiments which corroborated his theory and prepared a paper relative to the subject for presentation and publication. The use of cocaine soon became universal. 41 references.

F. A. M.


In a series of cases of bone graft operations a common feature was the