colon. Thus the medication given by large enemas would go into the portal system. The use of only 10 cc. of fluid guarantees retention in the ampulla of the rectum.

Groedel (20) reported, in 1935, on the alternating treatment by oral, intravenous and rectal digitals treatment, in the same patients. Since then we have followed numerous patients for several years under rectal strophanthin treatment. The dosage required was found to be between 0.0005 and 0.001, usually, but not always, given twice daily. One case may suffice as an illustration.

The female, aged 35, suffers from rheumatic heart disease with an enlarged heart and mitral stenosis and insufficiency. When first seen, nine years ago, she also had a complete heart block and severe bouts of ectopic ventricular tachycardia with Morgagni-Adams-Stokes syncopeal attacks. It had been previously discovered that even the smallest dose of digitalis caused nausea and tachycardia. After a short period of observation, strophanthin was given rectally and 0.2 quinidine sulfate orally. After approximately two years, the heart returned to normal sinus rhythm. The paroxysmal attacks of tachycardia have never recurred. Disease and the methods employed, are discussed extensively elsewhere, in the same patients. Since then we have followed numerous patients for several years under rectal strophanthin treatment. The dosage required was found to be between 0.0005 and 0.001, usually, but not always, given twice daily. One case may suffice as an illustration.

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THE TENDENCY TO RUMINATION

JOHN N. DAMBASSIS, M.D., Athens, Greece.

The psychological impulses which are transmitted via the autonomic nervous system and expressed by special behavior of the digestive system from infancy onwards have been analyzed by Alexander (1) (2). Kuhie (6) and others have assumed the existence of a "biochemical nucleus of the instincts" which acts upon the inherited though plastic synaptic patterns.

The various oral impulses—aggressive, receptive, sensual, rejective,—undoubtedly play an important role in producing various forms of gastric neurosis, once the

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original drives are suppressed or frustrated. The actual events of life are the precipitating factors in such neuroses, and they occur only in emotionally immature persons. The basic dynamism of personality is that very antagonism which must exist between the obligatory needs of the ego on the one hand and its own inhibitions on the other. Essentially these needs and inhibitions are compulsive and phobic in character, but we rationalize them as free choices in the moral and esthetic fields. While this is distinctly a "psychoanalytical" philosophy of life, it is forced upon us by profound consideration of the psychic facts evidenced in everyone's behavior. Gradual adaptation and development from infancy onward produce an accumulation of energy in the unconscious which we may regard as being incorporated in units known as "complexes." It may be assumed that most of the material in the unconscious has been evolved through successful integration, but those complexes which have escaped integration are projected into adult life, always in symbolic form (11).

In infancy, "repetitive activity" is a universal phenomenon without which primitive identifications would be impossible. We conceive of rumination—a physical event—as having its psychic counterpart, and both enter universally into our basic, obsessive-compulsive natures. Each individual however preserves unique dynamic aspects of his own and it is always hard to decide if these are hereditary or acquired (10).

The Ruminative Components

The impulse to breast feeding is partly tissue hunger and partly oral sensuality. Normal eructation—the "after feeding"—occurs as a result of complete satiation. The regurgitated milk brings a new taste satisfaction and the baby usually swallows the portion not expelled. Under unpleasant environmental conditions vomiting becomes an expression of dissatisfaction and represents an aggressive-rejective reaction.

Conscious as well as unconscious conflicts are produced in children by the restrictions which society imposes upon the erstwhile unrestricted ego, and out of these very conflicts emerge at length hostility, jealousy, hate, guilt, repentance, remorse, and so on. Should these conflicts be repressed, they may express themselves in the somatic behavior of the digestive system and give rise to such symptoms as anorexia, vomiting and rumination.

While rumination is considered by some authors (4) (7) (3) as quite normal, this view is debatable since rumination is not universal. Indeed, when it does occur, the underlying causes should be investigated (5). The tendency to rumination seen frequently in children, must in the case of adults be regarded as an expression of some conditioned reflex originating since childhood. Eruption and regurgitation, as components of the ruminative tendency, could profitably be studied as a contribution to our knowledge of various dyspeptic disorders. Warn (9) feels that the pediatrician is in an advantageous position for discovering the early disturbances which result in the conditions dealt with by the gastroenterologist.

Eruption is always due to swallowed air (8) except in instances of pyloric block with gastric fermentation. Air swallowing is not an uncommon phenomenon, but in severe instances we feel that voluminous eruptions symbolize the ejection of accumulated emotional tension. The psychiatric meaning of regurgitation is incomplete rejection, yet in some cases it involves a re-tasting of the food, as though to symbolize the conscious mind sampling what has been raised from the depths. When regurgitated food is remasticated and reswallowed we are then dealing with true rumination.

The ruminant person usually eats hastily and inattentively, drinks excess of liquids with or soon after meals, is emotionally unstable and completely lacks the gourmet's discrimination. (6) He meets life passively and it is only through re-eruption and re-eructation and partial re-eating of his concepts that he comes to understand experience. To his anxiety he adds a pattern of compulsive mental rumination. He has no tendency to complete rejection. He merely strives, as best he can, to convert unpleasant situations into tolerable ones. We also feel that he lends himself to oral erotic fixation.

Case Reports*

Three illustrative cases are presented,—one of simple reflex cardiospasm with true rumination, one showing an obsessive ruminative tendency, and one of globus hystericus with the same tendency.

Case 1. A 48-year-old multiparous woman presented the common menopausal symptoms,—chilliness, hot flashes, sweating—and a digestive complaint consisting of intermittent dysphagia and rumination. She said that the first food bolus descended with some difficulty, the second more easily and from then on no difficulty in swallowing was experienced. Before finishing the meal, however, dysphagia reappeared forcing her to eat hurriedly in order to complete the meal while she could still swallow. After the meal, epigastric fullness and bloating persisted for 30 minutes, followed by rumination about every 3 or 4 minutes. This consisted of an initial belch, food regurgitation, and then remastication and re-swallowing.

Careful radiological studies showed no achalasia or other abnormalities of the upper digestive tract. She might easily have been diagnosed as "nervous reflex cardiospasm associated with the menopause" and have been reassured that nothing was wrong, yet even a superficial psychological investigation would have revealed the true cause of her symptoms. She presented a father-dependent personality with an idealized Oedipus complex. Her husband though older than she, had previously been associated with a young woman of lower social status and very questionable morality. The patient had always loved and respected her husband, identifying him with her own cultured and virtuous father, so that upon being informed of her spouse's unfaithfulness, she experienced a sudden profound psychic trauma, which gave rise to insoluble conflicts. She was in the position of being unable to "drink the bitter cup" or to reject the unpleasant situation. Her frustration and re-elaborated complexes were thus first projected as cardiospasm and then as rumination.

Case 2. A 44-year-old man complained of post-prandial epigastric fulness with gaseous eructation and regurgitation of liquid with small food particles. The regurgitated material, being neither sour nor offensive, was sometimes expelled and sometimes re-swallowed. X-ray examination of the upper digestive tract was negative.

Emotionally he was a nonresistant, extroverted individual with repressed hostility toward his father and in a lesser degree toward his mother, brothers and sisters. His father had never believed him to be his own son and had accused his wife of unfaithfulness. The mother denied the accusation, but in order to appease her husband, adopted a frigid attitude toward the unfortunate son. Since the age of 12 he had been obliged to work and hand over his earnings to the family. Not until 1930 was he able to earn enough to live without privation.

*The first case has been taken from the author's monograph on "The Psychosomatic View of Disorders of the Digestive System," (pp 54-55) 1948, printed in the Hellenic language. The second and third cases are from the G. I. Clinic, Notre Dame Hospital, Montreal, where the author recently worked.

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