Crum Brown, with Fraser that the introduction of methyl into the molecule of certain spasm-producing alkaloids masks the effect of these by occasioning a curare-like action at the periphery.

Contrasted effects of methylbenzaconine and aconitine.—The toxicity of aconitine is, roughly, from 80 to 100 times that of methylbenzaconine towards rabbits and guinea-pigs, and much the same proportion holds for summer and winter frogs respectively. Whilst slight tendency to salivation and retching movements are produced by methylbenzaconine, and are in so far suggestive of a slight aconitine action, the absence of initial acceleration of respiration, of local irritation, and dyspnoeal convulsions, and the predominance of paralytic symptoms, are points of difference. The action upon the heart is entirely distinct, for the pulse is slowed by methylbenzaconine, the auricles eventually beating more rapidly than the ventricles, the action of the poison proceeds uniformly and without the intermissions which characterise aconitine, whilst the early phenomena of vagus stimulation have little in common. The general symptoms of poisoning in frogs have scarcely a point of similarity; quiescence, rapid failure of reflex and voluntary movement, without impairment of the cardiac action, being distinctive of methylbenzaconine, whilst excitement with great motility and persistence of voluntary movement follow aconitine. Fibrillation is much more pronounced after the former, though it is only a transitory phenomenon. The action on the heart differs widely in frogs as it does in mammals, whilst the curare-like action of the derivative on motor nerves is not produced by aconitine in doses which just suffice to arrest the heart. It is true that large but sub-lethal doses of aconitine are followed by a condition of almost complete paralysis which lasts for several days, but during this time there is slight voluntary and reflex movement, the nerve-endings are not put out of action, and the circulation is usually of the feeblest character, all conditions which are not found in the period of quiescence following methylbenzaconine.

Contrasted effects of methylbenzaconine and benzaconine.—Methylbenzaconine is from three to four times more toxic towards rabbits and guinea-pigs than benzaconine, and from twice to thrice as toxic towards frogs (*Rana temporaria* and *Rana esculentus*). In mammals, slight salivation, retching movements, and muscular tremor are characteristic effects of the former, but dyspnoea, ataxia, and paresis are also seen after benzaconine. Of the two, methylbenzaconine is distinctly less depressant towards the heart. Slowing of the pulse and want of sequence of ventricular upon auricular action occurs after both, but is a much earlier symptom after benzaconine, which causes more disorder in the motor mechanism. On the other hand, the intra-cardiac vagus is put out of function more readily by methylbenzaconine. Death after either poison is rarely preceded by spasm. Neither of the two compounds causes any local irritation in frogs, but methylbenzaconine produces active fibrillation in the muscles, to which it gains access and develops a complete curare-like action much more prominently than does benzaconine, the heart continuing to beat strongly. Benzaconine, in dose sufficient to cause such an effect at the periphery, acts disastrously upon the circulation. In partial poisoning by methylbenzaconine the characteristic rapid failure of the intra-muscular motor nerves on stimulation is well marked, but the subsequent recovery on resting, so characteristic of benzaconine, has not been observed.

CONGENITAL SPONTANEOUS GANGRENE.

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THE report of Dr. Armstrong Bowes's case of spontaneous gangrene in an infant in THE LANCET of August 31st, 1901, p. 586, leads me to publish the following case.

In May, 1898, I saw in consultation with my friend Mr. D. C. M. Lunt of Lymm a case of which I herewith give a *verbatim* rescript from my case-book.

"Girl baby. One week old. Nature of case, acute inflammatory gangrene (congenital). Date, May 3rd, 1898. Mother had one previous confinement (premature). This one at full term. Labour natural with slight delay after delivery

of head. When born child showed two areas of acute dusky inflammatory redness, one just below occiput, the other over and around the seventh cervical vertebra. Redness also on scalp. Three days after birth upper area sloughed (without any black patch). Black patch—i.e., gangrenous slough—formed in centre of lower inflamed area. When seen by me (May 3rd) black slough was separating and dull dusky redness extended down back and across neck. On site of upper area of redness was simple 'atonic' ulceration the size of a florin and some superficial 'weeping' sloughs on scalp (atonic ulcerations). May 5th: Area of redness extended round scalp and chest still dusky and passively congested. Condition worse. Black slough separated over back of neck, leaving somewhat brawny, dry-looking surface. Same appearance on occiput. Superficial skin necrosis extending on scalp. General dulness and tendency towards torpor. Internal strabismus has supervened (query: indication of central cerebral mischief of which superficial gangrene is 'trophic' evidence? or pseudo-ptomaine infection of nerve-centres due to septic absorption from sloughs, &c.?) Prognosis as bad as possible. May 8th: Patient died. No p.m. No evidence or history of syphilis."

The foregoing is a literal transcript of my notes of the case taken in my case-book at the time. I may say that at the first visit I unhesitatingly gave a fatal prognosis to the parents which was only too soon verified, though the child at the time seemed to be in fair health. On thinking the matter over I am entirely of opinion that the lesion was trophic from nerve central mischief and not from any septic lesion absorption. That this central mischief preceded birth is evidenced by the peculiar nature of the diseased areas and the fact that they existed at birth. I think I used the correct term when I described the process as acute inflammatory gangrene. The pathology of such a condition must necessarily be obscure. I confess to not being well acquainted with the literature of such cases, but whether they occur intra-uterine or at some period subsequently to birth they point, I think, to a community of origin, and that a central nerve one in the onset. The strabismus would favour this view, as also would the grave constitutional effects out of all proportion with the local lesions. These lesions I think from their character to be distinctive evidence of trophic deficiency for which no local cause can be adequately assigned. If a local cause plays any part it is that of injury—slight probably—to an area of already deficient trophic vitality.

I have never practised midwifery and therefore my opportunities of observing the newly-born are not very extensive. My memory holds two similar cases though I have only notes of this one. The parents in this case were well-to-do, but I am of opinion that amongst the poorer classes such cases will be found to be of much more frequent occurrence, as probably experienced obstetric practitioners can testify.

Warrington.

ADDED MILK IN BUTTER.—At the South-Western Police-court, London, on Sept. 12th, Messrs. Peaks, Gunston, and Tee, grocers, were summoned at the instance of the Wandsworth Borough Council for selling butter which contained an amount of moisture 6.5 per cent. above the accepted standard of 16 per cent. The basis of this butter was colonial butter—a particularly dry article which the defendants first softened and then incorporated in a mixer with a certain proportion of added milk. It was said that about 500 tons of this butter were produced weekly, and it was sold with a label which contained the words, "This choicest butter, blended with pure English full cream milk by new and improved machinery whereby it retains about 20 to 23 per cent. of moisture and acquires that delicacy of flavour which has made Peaks's butter so famous." Counsel for the defence submitted that by the label the purchaser was informed of the nature of what he was buying and therefore was in no way deceived. The magistrate in giving judgment found, firstly, that the object of the defendants was to introduce additional moisture and so increase the bulk, weight, or measure of the butter, and secondly, that the addition was made fraudulently. He inflicted a penalty of £10 with £5 5s. costs and gave permission to have a case stated. The same defendants were for a precisely similar offence fined £20 at Portsmouth on Sept. 10th, and £20 and £5 5s. costs at Wellingborough on Sept. 13th at the instance of the Northamptonshire County Council.