

Metabolism of Sodium Lactate

Q.—When fluids containing sodium lactate (racemic) are administered intravenously at rates of 5–40 mEq lactate per hour, what proportion of the L- and D-forms respectively are metabolized, and what proportion excreted in the urine?

A.—It was shown by Cori and Cori¹ that in the rat most of administered D-lactic acid is converted to liver glycogen, whereas L-lactic acid is not, and up to 30% appeared in the urine. According to the studies of Hartmann and Senn,² administration intravenously of approximately 100 mEq of racemic sodium lactate to children results in the release of all the expected sodium for formation of bicarbonate. Only very small quantities of lactate appeared in the urine, even with these amounts, and 90% of the additional blood lactate had disappeared in 15 minutes. It is therefore believed that most of the D-form is also converted to glycogen in man and that the L-form is largely oxidized.

REFERENCES

- ¹ Cori, C. F., and Cori, G. T., *J. biol. Chem.*, 1929, **81**, 389.
² Hartmann, A. F., and Senn, M. J. E., *J. clin. Invest.*, 1932, **11**, 327.

Dysdiadokokinesis in a Child

Q.—What is the significance of dysdiadokokinesis in all limbs in a mentally backward girl of 11?

A.—Dysdiadokokinesis is a name sometimes used to describe incoordination of rapid alternating movements, and it is most commonly the result of a disturbance of cerebellar function. In this case it is present in all four limbs and has been present from an early age in association with mental backwardness. It is probable that the child is suffering from a cerebellar diplegia, resulting from a developmental defect, injury or anoxia at the time of birth, or an acute neurological disease in the neonatal period.

Urticaria by the Seaside

Q.—A patient gets an urticarial rash when she goes near the seaside. Is there any protective lotion that would help?

A.—Most of the cosmetic firms supply light-protective creams which are of value. Creams containing titanium dioxide may be applied and reduced to a thin smear by partial removal with damp cotton-wool, and cosmetics may subsequently be applied on this. Chloroquine, 200 mg. twice a day after meals, would afford some protection, but in all cases reasonable care must be exercised in avoiding undue exposure. A hat with a wide brim helps to protect the face.

Silicone Spraying

Q.—Is there any industrial hazard in spraying with silicones?

A.—The silicone resins and rubbers are non-toxic and no industrial hazard is likely to arise in spraying these. Fairhall¹ reports that the vapours of hexamethyl disiloxane cause transient irritation of the conjunctiva and that repeated skin contact with solvent compounds should be avoided.

REFERENCE

- ¹ Fairhall, L. T., *Industrial Toxicology*, 1957, 2nd ed., p. 108. Williams and Wilkins Company, Baltimore.

Cherry-stone Poisoning

Q.—A 5-year-old child exhibited what appeared to be classical signs of hydrocyanic acid poisoning four hours after swallowing a large number of cherry stones. Could there be a connexion, and have any previous cases been reported?

A.—Hydrocyanic acid is not present as such in cherry stones. They contain a glucoside, amygdalin, and an enzyme, emulsin, which in the presence of water produce hydrocyanic acid, and the stones must be crushed before this reaction occurs. The amount of prussic acid obtained from 12 oz. (360 g.) of crude cherry stones is said to be not more than 2.3 gr. (150 mg.). This would be sufficient to

produce symptoms of poisoning, and might even cause death, but it is improbable that so large an amount would be eaten. There appear to be no recent references to cases of poisoning from eating cherry stones, but Taylor¹ refers to a case in which a girl aged 5 ate a large quantity of the kernels of sweet cherries; after a few hours she developed symptoms of poisoning, and she died after an illness lasting 40 hours. Her older brother also ate some cherry stones and was ill, but recovered.

REFERENCE

- ¹ Taylor, A. S., *On Poisons*, 1875, p. 632. J. and A. Churchill, London.

NOTES AND COMMENTS

Ethylene Disulphonate in Asthma.—Professor N. SAPEIKA (Capetown, S. Africa) writes: The answer provided (“Any Questions?” September 12, p. 446) regarding the value of ethylene disulphonate is incomplete. The Council on Pharmacy and Chemistry of the American Medical Association reported many years ago¹ that ethylene disulphonate (“allergosil”) is essentially distilled water. The evidence of the existence of such a compound is open to serious doubt. The compound, according to their expert chemists, could only exist on paper. Some idea of the dilution claimed is gained from the computation that 1 mg. of so-called ethylene disulphonate would require about 250 million gallons of water. According to another calculation² the entire quantity of water flowing over the Niagara Falls for seven days will have to be collected in order to obtain enough water to dilute 1 mg. ethylene disulphonate to the stated concentration. It has been estimated that 1 mg. would be worth 5,000 billion dollars.³ The subject was fully reviewed by the Council on Pharmacy and Chemistry, who condemn exploitation of physicians and patients.

REFERENCES

- ¹ *J. Amer. med. Ass.*, 1946, **131**, 1495.
² *Ibid.*, 1949, **141**, 1197.
³ *Ibid.*, 1946, **131**, 1502.

OUR EXPERT replies: The original question did not ask for the value of the treatment but only for its rationale and contraindications in asthma. My remarks on its value were, therefore, brief. Professor Sapeika's comments will no doubt interest readers even though “allergosil” is not now available.

5-HIAA in Urine.—Dr. G. X. TRIMBLE (Long Beach, California) writes: Reference is made to the question concerning 5-HIAA in the urine and whether it is excreted in excess in any condition except argentaffinoma (“Any Questions?” September 19, p. 516). Your expert stated he knew of no condition other than argentaffinoma in which gross increases of 5-HIAA occur. Evidence is available which indicates that some elevation in urinary 5-HIAA may occur in non-tropical sprue and in some individuals within a few hours after the ingestion of bananas.¹

REFERENCE

- ¹ Sjoerdsma, A., *New Engl. J. Med.*, 1959, **261**, 181 and 231.

Correction.—We regret that in our issue of October 24 (p. 804) the word “linguets” was used without the usual inverted commas to indicate that it is a registered trade mark (of Ciba Laboratories Ltd.).

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