

OUR PRIZE COMPETITION.

WHAT ARE THE FOLLOWING, AND WHAT ARE THEIR EFFECTS:—(1) ANÆSTHETIC; (2) HYPNOTICS; (3) ANTIPYRETICS; (4) MYDRIATICS; (5) NARCOTICS. GIVE AN EXAMPLE OF EACH.

We have pleasure in awarding the prize this week to Miss Mary Ramsey, S.R.N., Cert. Apothecaries' Hall, 64, Enmore Road, South Norwood, S.E.

PRIZE PAPER.

(1) *Anæsthetics* are drugs which produce insensibility to external impressions. They are divided into general and local. *General* anæsthetics (by inhalation) abolish consciousness and reflex action, and so prevent the perception of painful and other stimuli in the sensory centres. *Local* anæsthetics are applied by spray or other application to the part.

Chloroform is a good example of an anæsthetic. It is a colourless, mobile liquid half as heavy again as water, and non-inflammable, unlike ether. It was discovered in 1831, and introduced into medicine in 1847 by Sir James Simpson.

Effects of Chloroform. Stage 1. Great rapidity of thought, but disturbance of judgment and power of control. Giddiness, tingling, and other peculiar sensations are felt. The patient may be emotional, or may sing, shout, or struggle, and then pass off into dreams, with partial loss of sensation. The heart-beat becomes stronger, the pupils dilate.

Stage 2. Complete loss of consciousness, speech becomes unintelligible. May be muscular spasms, also coughing, retching and possibly vomiting. Pupils remain small.

Stage 3. Absolute unconsciousness and complete muscular relaxation, and in this stage operations are performed. Heart's action is weakened, most reflex movements abolished, pupils dilate again.

Stage 4. Breathing becomes shallow, face pallid, heart weak and irregular, pupils widely dilated.

Use of Anæsthetics. To relieve pain of operations, and convulsive diseases. Prolonged and delicate operations can now be performed. An anæsthetic is also occasionally a great aid in the diagnosis of abdominal conditions. They are also used in medical cases to quiet violent spasmodic states.

(2) *Hypnotics* is applied to drugs and any measures which produce sleep. Of the pure hypnotics, which dull the brain without much other effect, chloral hydrate is commonly used.

Effects. When taken internally in moderate doses it produces sound, dreamless, refreshing

sleep, more like natural sleep than that produced by any other drug, except bromides. It is dangerous in large doses, and persons taking it frequently are liable to contract a habit. For sleeplessness with no assignable cause, veronal, trional, or sulphonal, are the best hypnotics, as they are not attended by the risk of starting a habit which is hard to break.

(3) *Antipyretics.* Medicines which control and reduce the temperature in fevers, also applied to other measures such as cold sponging, wet packs, baths.

Effects. The drugs usually given for these purposes are known as "Diaphoretics," and increase the action of the skin, producing sweating. Opium acts powerfully as a diaphoretic, especially when in combination with ipecacuanha, as in Dover's powder, and alcohol has similar properties. Diaphoretics are of great service in many diseases, but in certain circumstances, however, particularly in the form of baths, may be unsafe, especially where there is any affection of the heart or lungs attended with embarrassed respiration.

(4) *Mydriatics.* Drugs which produce dilatation of the pupil. Belladonna and cocaine are well known examples.

Effects. Atropine—the active principle of belladonna is widely used in eye diseases. It is said to be used as a cosmetic to give ladies' eyes a full, lustrous appearance, but in addition to this effect it temporarily impairs vision by paralysing accommodative power, which is the faculty possessed by the eye of altering its refractive power so that rays of light, whether from a near or distant point, are brought accurately to a focus on the retina.

In eye troubles it is used to dilate the pupil for more thorough examination of the eye interior, or to draw the iris away from wounds and ulcers on the centre of the eye; it also soothes the pain due to light falling on an inflamed eye, and is further used to paralyse the ciliary muscle and so prevent accommodative changes in the lens of the eye while the patient is being tested for spectacles.

(5) *Narcotics* and *Hypnotics* are practically synonymous. For the relief of pain, drugs known as "Anodynes" are used. Hyoscine, chloral hydrate, chloralamide, paraldehyde, sulphonal, cocaine, trional, quinine sulph., and many other useful drugs come under this heading. Head massage, electrical applications, &c., are useful in insomnia.

HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss Phoebe Goddard, S.R.N.; Miss Henrietta Ballard, S.R.N.; Miss P. Thomson.

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