

MEDICINE

Heal Cut Spinal Cord

Paralysis from injured or cut spinal cords may be overcome by treatment with the drug, Pyromen, experiments with two patients show. Early attention needed.

► A NEW treatment that may overcome or prevent paralysis from damaged or cut spinal cords was reported to scientists at the National Institutes of Neurological Diseases and Blindness in Washington.

The first human "guinea pig" for the treatment is 21-year-old Charles Van Diviere of Brunswick, Ga., who two years ago was believed dying after an accident in which the spinal cord in his neck was crushed if not actually broken. Both arms and both legs were paralyzed and he had no control of body functions.

Now, after two years of the new treatment, he is able to go about without crutches and wears a short brace only part of the time. He is back in college, about to graduate, goes to dances, swims, climbs stairs and does everything a normal college man does except take part in sports.

He and his grateful family credit the new treatment with his recovery. Dr. William F. Windle, scientific director of the Baxter Laboratories at Morton Grove, Ill., the man largely responsible for developing the treatment, is more conservative. He thinks the treatment with the drug, Pyromen, saved the young man's life, but points out that the family was able to afford the best of care for the boy in every other way and that occasionally patients with this kind of injury recover without any sort of treatment.

More exciting to Dr. Windle is a patient now at the Veterans Administration Hospital in Richmond, Va. This patient is the only one, so far as Dr. Windle knows, who has responded to the drug and who is known positively to have had his spinal cord cut across. In other patients there is

some doubt as to whether the spinal cord was cut or compressed without actually being cut.

The drug, Pyromen, is a polysaccharide derived from a microorganism of the *Pseudomonas* species. It was developed, as a medicine valuable for its fever-producing qualities, by Dr. N. M. Nasset of Baxter Laboratories. About two years ago it was found that very small doses, less than those that produce fever, would prevent the growth of scar tissue at the cut ends of spinal cords in dogs and cats. Nerve fibers grew across the cut ends and nerve function was restored.

This reversed previous scientific opinion that cut spinal cords could not be regenerated. The formerly hopeless outlook for patients with damaged or cut spinal cords, whether from civilian or war injuries or disease such as infantile paralysis, was somewhat changed.

Dr. Windle thinks now that to do any good, the Pyromen treatment must be started very soon, within a few days, after the injury or damage, unless an operation is done to remove the scars that have formed at the injured place. Whether with such an operation the paralyzed victims of long-ago injury and disease can be helped is not known yet.

A number of patients are now getting Pyromen treatment. The one in Richmond, in whom a cut rather than damaged spinal cord was proved, has gotten back some voluntary movement. It is not yet enough to do him any good, but it does bear out the results in cats and dogs and adds fresh hope that the treatment may prove successful.

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PALEONTOLOGY

Ape-Gibbon "Missing Link"

► A HALF-APE stage in evolution may have come before the development of the gibbon, just as an ape-man may have preceded man.

Evidence of such a "missing link" has been found in a limestone deposit in Czechoslovakia and is reported in a communication just received at the U. S. National Museum from Dr. H. Zapfe, Vienna paleontologist.

The bones were those of five individuals of a Middle Miocene species called *pliopthecus*. Previously, these creatures had been known only from remains of skull bones and teeth and these, especially the teeth,

showed close relationship with the modern gibbon.

But the new find includes arm and leg bones. Study of these shows that the legs of *pliopthecus* were very much like those of the gibbon. The arms, however, were very different.

Striking thing about the modern gibbon is the extreme length of its arms and their form which is well adapted to its habit of swinging about from branch to branch in the tree-tops. The arms of *pliopthecus*, it is now found, were very different from those of the gibbon. Their length in proportion to the trunk is more like those

of the chimpanzee and man. The form of the bones, especially that of the humerus and ulna, has a primitive look.

The find, Dr. Zapfe reports, is a "brilliant confirmation" of the suspicion of paleontologists that the gibbon did not develop his tree-swinging way of life until relatively recently, that is to say not more than about ten million years ago.

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ASTRONOMY

Faint Comet Discovered; Visible in U. S. Night Sky

► A NEW comet has been discovered in the constellation of Andromeda, visible from the United States in the early morning hours. When found it was of the tenth magnitude, thus far too faint to be seen with the naked eye or binoculars.

The comet will be called Comet Mrkos after its discoverer, Antonin Mrkos of the Astrophysical Observatory at Skalnaté Pleso, Czechoslovakia. This is the second comet to his credit; the other, also of the tenth magnitude, was spotted in January in 1948.

Word of the discovery was cabled by Miss J. M. Vinter Hansen of Copenhagen University Observatory to Harvard College Observatory, Cambridge, Mass., clearing house for astronomical information in the western hemisphere.

When found on May 14, the comet's right ascension was 23 hours, 57.7 minutes; its declination plus 40 degrees, 42 minutes.

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ENGINEERING

Wrong Metals Can Spoil Research Wind Tunnels

► CAREFUL ATTENTION must be given to metal out of which low-pressure wind tunnels are to be built for studying flight characteristics of jet planes and guided missiles from 40 to 60 miles high.

George J. Maslach, supervising engineer of the Institute of Engineering Research at the University of California, reported to the American Institute of Chemical Engineers meeting in French Lick, Ind., that cast metals often have too many microscopic holes in them to keep the air pressure low inside the tunnel. Rolled or forged alloys are better in that respect.

Metals must not oxidize or rust inside the tunnel or the oxide coating will absorb moisture and create unfavorable test conditions, he warned.

After the tunnel is completed, the metal must be cleaned thoroughly and covered with low vapor pressure paints and varnishes.

Creating the vacuum to simulate stratospheric air pressures largely can be done by modern commercial air pumps capable of high-capacity, low-density air flow.

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