INTRATHECAL ALCOHOL BLOCK—EXPERIENCES ON 41 CASES

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THE Intrathecal AB is a true chemical rhizotomy. Although the application of this treatment presents some limitations, I nevertheless consider this technique of a great importance and generally giving good results.

Acting by destruction of spinal roots, AB is suggested to eliminate spasticity in the lower limbs, abolishing the motor efferent stimulations and cutting off the afferent sensory ways which send peripheral stimulations to the cord, causing, therefore, motor reactions by the isolated cord made independent by the cord transection.

With AB we can obtain two different results: flaccid peripheral paralysis and complete anaesthesia. However, for the same reasons, one of the limitations in applying AB is the persistence of sensitivity under the damaged level. In these cases it is necessary to evaluate with great care if the advantages of the reduction of spasticity are greater than the damage due to the loss of sensitivity.

ADVANTAGES

The advantages of this technique are:

1. The removal of spastic contractures and pains which very often accompany the spasms.
2. Facilitation on physiotherapy.
3. Possibility for the patient of assuming the four positions in bed: supine, prone and both lateral to treat or prevent decubitus.
4. Possibility of restoring sitting position or walking capability with or without calipers.
5. Recovery of sores due both to the rubbing on bed during spasm and to the stress of skin over bone protrudences.
6. Elimination of articular ankylosis and muscular contractures due to continuous fixation in flexion of the involved articulations.
7. Also very important is the benefit on bladder control. In fact the patient suffering very serious spasticity has his bladder continuously compressed by contractions of abdominal muscles and frequent detrusor contractions. Therefore, it is necessary to adopt indwelling catheter procedure in order to avoid continuous loss of urine. The complete relaxation of the abdominal wall after AB permits voluntary and controlled emptying of the bladder by percussion and/or compression. The complete incontinence that follows AB disappears within one or two months.

In every case I have obtained a good degree of vesical reeducation, so that the patients are able to empty their bladder every three hours.

DISADVANTAGES

I think that the only real disadvantage of AB is its psychological aspect concerning male patients. The abolition of any sexual activity following AB is a great obstacle for the patient to be overcome although we know that no intercourse is possible for patients presenting continuous spastic flexion of the hips and crossing of lower limbs by contractions of the adductor muscles. This consideration is practically the only one inducing the patients to refuse to have an AB done. I think it is absolutely necessary to inform the patient of the consequences of AB treatment on the sexual aspect from legal and humanitarian reasons.

TECHNIQUE

The patient must lie in bed in lateral tail-up position to 25 degrees keeping up the side of higher spasticity. After lumbar puncture—I prefer to make the block not higher than L1 vertebra even in high lesions—10/12 cc. of 95 per cent alcohol is injected with a speed of 2 cc. per minute. During the injection it is already possible to observe the disappearance of the spasticity. After the injection, the patient is kept on the same side for about a quarter of an hour and then turned on the other side and then into supine position. This is followed by three-hourly turns; 24 hours after injection the bed is put into horizontal position and after 48 hours the patient is allowed to sit up in bed and start his physiotherapy.

COMPLICATIONS

My experience is based on 42 cases since 1958. I have recorded complications in four cases only. Three cases, all with free CSF flow, showed immediate face blushing, dizziness, nausea accompanied by very strong headache for about 24 hours after AB has been made. There was not any fever and the syndrome slowly disappeared during the following 48 hours. No drugs were prescribed except for pills against headache such as Cibalgin or Optalidon and the patients had an ice-bag put on their heads and were left lying horizontally for 24 hours after complete remission of symptoms. These complications were obviously due to diffusion of a little quantity of alcohol to meningeal cerebral areas. In another case, because of an important spinal deformity, the injection showed immediate bleeding even after change of the level of the injection. I didn't inject alcohol, of course, and repeated the injection one week later one vertebral interspace higher than the one chosen the first time; there was no more bleeding and AB gave good results.

CONCLUSIONS

The very simple technique and the very good and lasting results can very well make this treatment an excellent help for the solution of the great problem of spasticity. The only limitation is the destructive effect on the sexual functions and we must also consider the effect on the sensibility.