period of one year and ten months. . . Of 593 patients who received tuinal and paraldehyde, 348 were also given demerol. . . . Demerol . . . is largely an analgesic drug, and combined with a barbital and paraldehyde, its action is highly desirable. No material complications or untoward side reactions were noted from its use.’’

J. C. M. C.


“The chief types of local and regional anesthesia utilized in obstetrics consist of straight infiltration, pudendal, presacral and parasympathetic nerve blocks, spinal and epidural or caudal analgesia.’’

J. C. M. C.


“Owing to the great number of war casualties with wounds of the upper extremities which came under our care at the Orthopedic Services of the Casa de Salud-Valdecilla and the Hospital Militar Cantabro, we have been able to compile 3000 cases in which block anesthesia of the brachial plexus has been used. . . . We shall confine ourselves to a discussion of the accidents encountered in the use of brachial plexus block, one of which in our series proved fatal. . . . In practically all of our cases, the technic described by Kulenkampff, and expanded by us in our previous paper, was employed. . . . The accidents encountered in brachial plexus block are classifiable into pleuropulmonary, neural and vascular. . . . At present we are using novocain ‘Bayer,’ a 2 per cent solution ‘without adrenalin,’ and in none of our cases have we observed lipotemias or syncope; only once did a mild degree of cerebral excitation, as is seen in the first stage of ether anesthesia, occur, when the dose exceeded the currently used dose of 20 cc., or when the latter dose was employed in children. Reducing the dose to a suitable amount, we have succeeded in obtaining adequate anesthesia in babies as young as one and one-half years of age. . . . In one case, when by error novocaine with adrenalin was used, tachycardia and arrhythmia resulted of such a degree, that, though the patient did not expire, death seemed imminent. . . To obtain a prolonged anesthesia, we have never employed perecan; in all our cases an anesthesia of two hours, produced with novocain, being sufficient. Concentrations of novocain of less than 2 per cent produce poor results, and we deem greater than 2 per cent to be dangerous. . . .

“We believe it a prudent measure to inject the drug very slowly and to record the rate of the radial pulse. . . . In the foregoing accidents coramine has been found efficacious. . . . From a careful review of the literature on brachial plexus block, we have gleaned three reports of death following this procedure. . . . All of these deaths resulted from trauma to the apical pleural and lung parenchyma. . . . On five occasions we punctured the parietal pleura the sibilant sound produced by the inrushing air, however, placed us on guard, and the needle was withdrawn carefully. . . . We shall not consider the transient aphonies and Claude Bernard-Horner syndromes that supervene from the anesthesia of the recurrent laryngeal nerve and of the cervical sympathetic chain respectively. Hemidiaphragmatic paralysis
can occur as a result of phrenic nerve block if excessive infiltration of the region, or incorrect technic is practiced. We have, however, on four occasions, produced bilateral brachial plexus block without any untoward effects. . . On one patient there resulted a mild contraction and paresthesia of the lower extremity together with a moderate lipotemia. We conjectured that the needle may have entered the spinal canal through an intervertebral foramen. . .

"Of the neural complications that follow brachial plexus block especially interesting are the neuralgia and paresthesias. . . In five of our own cases the complications abated in 20 days. . . A thesis previously cited, incorporates the results of a study of the effects of brachial plexus block on the chronaxie. We have never been able to observe any alteration. . . Puncture of the common carotid, subclavian, vertebral, and inferior thyroid arteries can, and, in fact, does occur. It has very frequently happened in our own experience. Simple withdrawal of the needle alone is necessary, when it does occur. . . Intra-arterial injection of the anesthetic produces only a transient state of anesthesia. On the other hand, intravenous injection is dangerous, for the anesthetic is carried to the heart. Moreover, part of the drug may reach the medulla oblongata and produce cardiorespiratory difficulties. Intravenous injection is eight to ten times more toxic than intra-arterial injection, according to Pauchet, even though only one-sixth of the drug ever reaches the cerebrum. We know of no case of death reported as resulting from this mechanism. In the absence of other explanations we believe that perhaps the single case of death in our own series resulted from intravenous injection of the anesthetic. . . We consider the infraclavicular tech-

nic of Balog or that of Anglada, Santoni, and above all, the axillary technic of Hirschel to be very dangerous. . . . Our reasons for this statement are that the artery and vein are in proximity in the infraclavicular region, and that the nerves of the plexus form a network around the vein at the level of the axilla; thus the veins are more easily exposed to accidental puncture. All of the cases of death and accident, including our own, can be imputed to errors in technic which are easily averted."

J. C. M. C.


"In the light of the available published data the apparent mechanism of action of analeptics is a physiologic antagonism to depressant drugs, but in view of the needed investigation on the problem this can be no more than a tentative conclusion. Pierotoxin and metrazol (pentamethylenetetrazol) are the most valuable analeptics obtainable today, with pierotoxin being the most potent, judging from laboratory research. Pierotoxin is also more dangerous to use and should only be used in deep depressions and then by someone well versed in its actions. Before the true part played by these drugs in the treatment of depressions can be fully evaluated, more complete and detailed clinical summaries must be made and compiled. The use of analeptics in the treatment of depressions should be only a part of a carefully integrated schedule of treatment including oxygen therapy, pressor drugs, fluid and pulmonary ventilation if necessary, as well as more than one analeptic if indicated."

J. C. M. C.