

Status of Women reported in 1970 that the "higher level of education is not reflected in earnings". In fact in every occupational group, the Commission found, average earnings of male workers were considerably higher than those of females – and in some cases more than double.

Hope for equal treatment

However, a variety of reasons suggest to the Bank that in future, women in the labour force will be treated more fairly – particularly at levels of higher responsibility. These include the articulation of women's grievances by women's movements throughout the Western world, government legislation forbidding discrimination in employment practices on the basis of sex, the influx of more highly educated women onto the labour market, and a shortage of supply in many "male dominated" professions.

Woman invades Man and His World

A major exhibition of photography – a testimonial to woman – composed of 522 photographs from 85 countries will be presented at Montreal's Man and His World exhibition this season.

The collection, which has received high acclaim in Europe, was organized in 1968 in West Germany by *Der Stern* magazine in conjunction with 400 international art museums.

The exhibition, "Woman", is divided into 61 categories, including homage to beauty; social destiny; motherhood; militant women, and little girls. Each aspect is represented by various photographic perspectives.

A total of 236 photographers contributed to the exhibition, Yousuf Karsh being the only Canadian.

The collection is presented by the Goethe Institute of Montreal.

Carbonated local anesthetics bring faster, more prolonged relief from pain

Since local anesthetics do not affect the physiology of the body, they are often preferred to general anesthetics. However, the local anesthetics now in use have drawbacks. A new kind of anesthetic, the carbonated local anesthetic, has been tested by a member of McGill University's Department of Anesthesia. Studies reported below, from the June issue of Research McGill, claim its superiority over the standard hydrochloride solutions.

In many surgical operations, the use of a local anesthetic is preferred to a general one, particularly in cases of surgery on the upper abdominal and chest areas where a local anesthetic alleviates pain which obstructs proper breathing, thus eliminating post-operative bronchial complications. It also applies in obstetrical patients, where a general anesthetic can have adverse effects on both mother and child.

Although research during the past 25 years has improved the quality of local anesthetics, drawbacks, however, still remain. For instance, some anesthetics do not act immediately upon injection, but take effect only ten or 15 minutes later. Also, sometimes small areas of the area to be anesthetized are not affected and the patient still experiences pain.

A new kind of local anesthetic can reduce these drawbacks. Known as carbonated local anesthetics, they have been tested since 1964 by Dr.

Philip Bromage, Chairman of the Department of Anesthesia of McGill University, Montreal.

The standard way of manufacturing a local anesthetic has been to add a base, such as lidocaine or prilocaine, to hydrochloric acid, thus producing a water-soluble hydrochloride salt. Upon injection, the solution must penetrate body membranes and tissues in order to deaden nerve endings, thereby cutting off pain stimulation to the spinal cord.

With the carbonated solutions, carbonic acid, which is produced by bubbling carbon dioxide through water, is substituted for hydrochloric acid. Local anesthetic bases can be treated with carbonic acid to produce water-soluble salts. When solutions of these salts are injected into the body, the carbon dioxide quickly permeates body tissue, altering the acidity of the tissue, thus permitting the anesthetic base to enter body cells more quickly

and in greater quantity than it would in a hydrochloride solution.

Results of tests

Studies of these carbonated anesthetics have proven their superiority over the standard hydrochloride ones. In one survey 566 patients who had been injected with carbonated anesthetics for surgical and obstetrical reasons were compared with 251 who had received hydrochloride solutions of the same bases. The carbonated solutions not only acted quicker than the hydrochloride ones (onset time of analgesia was shortened by one third), but also increased the intensity of analgesia by one third. Carbonated solutions seemed more efficient at blocking all areas to be anesthetized. In addition it was found that the effects of the carbonated anesthetic lasted up to 15 percent longer than the effects of the hydrochloride solutions. No objectionable side effects were noted in the patients who had received the carbonated solutions. Apart from these objective observations, patients receiving the carbonated anesthetic, who at some time previously had received a hydrochloride solution, quickly noticed the superiority of the carbonated one.

In another study, the effects of six different local anesthetics – four hydrochloride solutions and two carbonated solutions – were compared in 433 patients who were in labour. The incidence of pain ranged from 1 per cent with a carbonated solution (carbonated lignocaine) to 12.8 per cent with a hydrochloride solution (amethocaine hydrochloride) and was four times higher with lignocaine hydrochloride than with carbonated lignocaine. It was concluded that carbonated solutions possess greater potency to overcome areas that are resistant to anesthetics than do hydrochloride solutions.

These studies point to the advantages of the carbonated solutions. However, the importance of this advance over the standard hydrochloride solutions can best be emphasized by noting that other methods of improving the standard solutions have been tried and have failed. Additives which would improve the intensity and length of analgesia, would also have dangerous or objectionable effects on the patient. Such effects have not been observed with carbonated solutions. And, though the