companied by any pain or discomfort. This bleeding continued until she sought advice on July 29.

The past history was irrelevant, except for repeated attacks of psoriasis. She had had one pregnancy which terminated with a living healthy child five years ago.

Physical examination revealed a thin young woman who did not appear acutely ill. A moderate pallor was present. The heart and lungs were normal, blood pressure 104/68, pulse 70, temperature 98°. The breasts were normal and did not exhibit any signs of pregnancy. The abdomen was scaphoid, not tender and no masses were palpable. Vaginal examination revealed a thin, dark, bloody discharge. The cervix was firm and contained numerous small cysts. The uterine body was small, anteverted, normal in contour and not tender. No masses were palpable in either tubal region and the ovaries, which were easily felt, seemed equal in size and not tender. A catheter specimen of urine was negative for sugar and albumin and showed three pus cells per high power field. Hæmoglobin was 72%, red blood cells 3,000,000.

Owing to the lack of physical findings, it was decided to observe the patient further and she was placed on iron therapy in an attempt to correct the anæmia and instructed to report again in a week's time.

She again presented herself on August 2, still complaining of vaginal bleeding and as there were no further demonstrable physical findings it was felt advisable to do an intra-uterine exploration and obtain an endometrial biopsy. Consequently on August 3, under sodium pentothal intravenous anæsthesia, the patient was carefully examined bimanually without adding further to our knowledge of the diagnosis. At this time the cervix was dilated and a biopsy of the endometrium taken. This biopsy was submitted to the pathological laboratory and the sections were described as showing a "premenstrual endometrium".

A tentative diagnosis of "functional bleeding" on a disturbed endocrine basis was made and the patient was discharged from hospital and placed on 200 units of A.P.L. intramuscularly every second day. She continued to have vaginal bleeding, using two to three pads daily until August 24 when she experienced a rather sharp pain in the lower abdomen for the first time during her illness. Vaginal examination at this time revealed the bleeding to be of a brighter red colour than previously. The cervix and body of the uterus were tender and a mass about 4 cm. in diameter was now palpable to the right of and posterior to the body of the uterus. This mass was tender. Colpopuncture was not done. The hæmoglobin at this time was 72%, red blood cells 2,700,000, and white blood cells 5,300. A diagnosis of ectopic pregnancy was made and laparotomy advised.

At operation the following day, under spinal anæsthesia (nupercaine 1-1,500, 12 c.c.) a lower midline incision was made and the abdomen opened. Approximately three ounces of blood-tinged fluid was found in the pelvic cavity. The uterus was small, bluish in colour and anteverted. The left tube and ovary were normal in appearance. The right tube was normal in size and colour and *the fimbriated end was free.* Lying posterior to the uterus and adherent to the posterior leaf of the broad ligament and the right utero-sacral ligament a mass was found in the right ovary 6 cm. in diameter. The base of this mass showed a small amount of normal appearing ovarian tissue 1 cm. in width. Overlying this was an area of yellowish-coloured tissue which appeared to be corpus luteum. The balance of the mass which was about 4 cm. in diameter was bluish in colour and appeared to be a large hæmatoma. The whole mass was freed from the broad ligament and the utero-sacral ligament and was resected through the normal appearing ovarian tissue, leaving as much of this as possible. The right tube was not removed. The raw area of ovarian tissue was oversewn with No. 00 plain catgut. The appendix was removed and the abdomen closed without drainage.

The convalescence was entirely uneventful and the patient was discharged from hospital on the tenth post-operative day.

Pathological report.—Gross specimen: The specimen consisted of a mass of tissue, 4 x 3 x 3 cm. It was moderately firm in consistency. On incising the mass it was found to consist of an outer shell whose walls were 0.5 cm. in thickness, surrounding a cavity covered by a grey lining membrane and containing a fetus 1 cm. in length. The base of the resected mass was yellow in colour and appeared like a corpus luteum.

Microscopic findings: Sections showed ovarian tissue. In one region was a portion of a large corpus luteum. Elsewhere were clusters of well preserved chorionic villi surrounded by abundant blood clot which occupied the greater part of the sections.

Diagnosis: Ovarian pregnancy.

I believe there can be no doubt in the above cited case, considering the fact that the fetus was found intact imbedded in a sac surrounded by ovarian tissue that this was a case of primary ovarian pregnancy.

I wish to express to Dr. Wm. Magner, Pathologist of St. Michael's Hospital, Toronto, my sincere appreciation for his opinion on the microscopic sections of this specimen.

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Special Articles

CERTIFICATION OF SPECIALISTS IN CANADA

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Recent discussion on measures of Health Insurance has brought to the fore the question of specialists and their rôle in the scheme of things to be. In federal and provincial governmental circles, the matter has taken on an increased importance, and the designation and certification of specialists have become a very necessary procedure.

HISTORICAL SUMMARY

A brief history of certification of specialists and a résumé of the present situation are deemed both desirable and timely.

A specialist has been defined as "one who devotes himself to a particular branch of a profession, science or art; one who has a special knowledge of some particular subject".

There have been specialists in medicine since the dawn of medical history. In spite of this ancient lineage however, it was not until the turn of the last century, that specialism began to reach its present state of development. Due to the extraordinary expansion which has taken place in the last 30 to 40 years and the increasing complexity of the art and science of medicine the development of specialism has been an inevitable sequel and specialism is now regarded as a normal method of practice.

Unfortunately, the lure of increased rewards from specialist practice caused the pendulum to swing too far. The rôle of specialist was not infrequently assumed without adequate training or demonstrated competence. This led to a movement for the development of a mechanism by which the real and competent specialist could be distinguished from the self-styled variety. There followed soon a planned effort to formulate standards, and to set up bodies to supervise the training and test the competence of specialists, and to designate as specialists such as are entitled to the designation.

Certification of specialists in the United States.—The first specialist board formed on this continent was the American Board of Ophthalmology, organized in 1916. Boards were formed in Otolaryngology in 1924, in Obstetrics and Gynæcology in 1930, and in Dermatology and Syphilology in 1932.

Organized quite independently of each other, it was soon realized that there was a need for a national and uniform standard governing all branches of medical practice. In 1933 the American Medical Association authorized its Council on Medical Education and Hospitals to formulate these standards and give official approval to such certifying boards as would meet the requirements.

Simultaneously, an Advisory Board for Medical Specialties was organized to "co-ordinate graduate education and certification of medical specialists in the United States and Canada". This Board acts in an advisory capacity to certifying Boards and functions in close cooperation with the Council on Medical Education and Hospitals of the American Medical Association. Applications for official recognition of special examining Boards are referred to the Council through the Advisory Board for Medical Specialties.

Since these bodies were formed, Boards have been approved in eleven other specialties, Pædiatrics, 1933, Psychiatry and Neurology in 1934, Orthopædic Surgery, 1934, Radiology, 1934, Urology, 1934, Internal Medicine, 1936, Pathology, 1936, Surgery, 1937, Anæsthesiology, 1938, Plastic Surgery, 1937, and Neurological Surgery, 1940. The proportions to which the practice of certification has grown may be gathered from the fact that 23,277 certificates had been issued up to March 20, 1944.

The tendency to subdivide specialism too minutely has been checked by the designation of certain specialties as sub-specialties, which require prior certification in a major and basic specialty. For instance, the American Board of Internal Medicine certifies specialists in Allergy, Cardiovascular disease, Gastro-Enterology and Tuberculosis, and the American Board of Surgery certifies specialists in Proctology. In both cases prior certification is required in Internal Medicine and Surgery respectively.

Although the Advisory Board for Medical Specialties expressly provided for the certification of specialists in Canada, no provision was made for representation of Canadian specialists as such, except indirectly through the specialist societies which have Canadian membership.

Certification in Canada. — The movement across the border did not pass unnoticed in Canada, and in 1934, the Council of the Canadian Medical Association, in response to requests from various sources, appointed a committee to study the question. At the same time, the Council of the Royal College appointed a study committee. Both committees concluded that it was desirable that certification be controlled by a national organization, in order that uniform standards of qualification might be set up for all specialties in Canada. It was also concluded that the Medical Council of Canada was the logical body to undertake the work. Accordingly in 1935 a request was forwarded to that body. After studying the suggestion, the Medical Council announced that it could not undertake the responsibility. Subsequently, in October, 1936, the Royal College was invited by the Canadian Medical Association to act as the supervising body in the matter of certification and in June, 1937, the Royal College formally accepted the responsibility. An amendment by the Dominion Parliament to the Charter of the College, which it was found necessary to secure, was obtained in 1939.

The Royal College proceeded rather cautiously and at the outset approved only six specialties for certification, Radiology, Ophthalmology, Otolaryngology, Dermatology and Syphilology, Pædiatrics, and Urology. At this time it was decided that for Internal Medicine and General Surgery the proper qualification was the Fellowship of the College. Recently however, many circumstances have arisen to make it desirable to extend certification to these main branches of Medicine and Surgery, and in 1943 the Royal College Council formally approved these branches for specialist certification.

At the same time Obstetrics and/or Gynæcology was approved for certification. More recently Neurology and/or Psychiatry, and Orthopædic Surgery have been added to the list.

The control of certification is vested in the Council of the College acting through committees set up in each specialty. These Committees

are widely representative of the profession. Their membership is not limited to Fellows of the College though it is stipulated that one member, preferably the Chairman, shall be a Fellow of the College. In those specialties in which a Canadian national organization exists care is taken to secure a harmonious relationship by permitting the organization the right to nominate the Committee.

Ultimately, certification will be by examination.

The qualifications for certification have been stated in general terms, thus:

The candidate shall possess the following qualifications:

(*a*) Satisfactory moral and ethical standing in the medical profession.

(*b*) Graduation from a medical school approved by Council.

(*c*) A general internship of at least one year in a hospital approved by Council.

(*d*) Study and special training in the specialty in which the certification is desired of not less than two years, in a hospital approved by Council.

(*e*) Knowledge of the basic medical sciences necessary to the proper understanding of the specialty in which certification is desired.

(*f*) The course of the graduate training shall include, depending on the specialty to be practised, an adequate period of instruction in Internal Medicine or General Surgery.

(*g*) Study and/or practice in a specialty in which certification is required for a further period of two years.

At the outset, however, it has been thought wise to provide certification without examination to those who have practised a specialty for at least five years, and who are considered by the Council of the College to be proper recipients of the certificate of qualification in their respective specialties.

To the present date, certificates have been issued without examination to specialists in seven specialties: Anæsthesia, Dermatology and Syphilology, Obstetrics and/or Gynæcology, Otolaryngology, Pædiatrics, Diagnostic and/or Therapeutic Radiology, and Urology.

In order that all registered medical practitioners in Canada who have practised any one of the specialties so far approved for certification for a period of not less than five years, may have the opportunity of applying for certification without an examination, a circular letter which contains full information concerning certification is being sent to each registered practitioner in Canada. Those who are eligible and desire to secure certification by the College without examination are asked to complete the application form enclosed with the circular letter, and return to the Honorary Secretary of the Royal College in Ottawa.

It is hoped that applications may be completed and forwarded to the College on or before September 30 of this year. Immediately on receipt of the applications they will be referred to the appropriate specialist committee for consideration. Should certification be recommended by the Committee and approved by the Council, a certificate will be issued on payment of the prescribed fee of twenty-five dollars.

Criticism that has been expressed in a few quarters over the cost of certification warrants some explanation.

It is obvious that certification cannot be carried out without some financial outlay by the College. The cost of administration will be considerable, even if the officers of the College continue to give their services gratuitously. In the future when certification will be by examination, the cost will be greatly increased. It is therefore necessary that funds be available to administer the project of certification for which the College has assumed responsibility. It should be pointed out that the fees charged by American Boards are without exception much larger than those exacted by the Royal College, and the American Boards have the additional pecuniary advantage resulting from much larger memberships.

The principle has been established by the College that multiple certification may be granted to a candidate who possesses adequate qualifications in more than one specialty. The need for this arose from the fact that many Canadian specialists customarily practise both Ophthalmology and Otolaryngology. If such individuals satisfy the requirements for both specialties, they are granted two certificates. Similarly there may be a combination in one certificate as in Diagnostic and Therapeutic Radiology, Obstetrics and Gynæcology, and Neurology and Psychiatry.

So far, the College has not insisted upon a limitation of practice to the specialty in which the certificate is issued. Some of the American Boards demand that those certified shall limit their practice exclusively to the field in which they are certified, under penalty of revocation of the certificate.

The Royal College holds the view that its primary concern is with the qualifications of specialists. In all probability these qualifications constitute the main interest of the general public. It would be wrong if certification implied the establishment of a small group of self-interested persons in each specialty, protecting themselves from competition.

The College register of certified specialists will enable governments, institutions and the public generally to recognize those who are competent specialists.

Not the least advantage of certification will be found in the raising of the standards of training and qualification of specialists, and the maintenance of these standards at a uniformly high level across the Dominion.

The fear has been expressed that men and women now serving in the medical services of the armed forces will be overlooked, and that their claims to special training will be disregarded. On the contrary the value of the special training they have obtained in the medical services of the armed forces will be given every consideration.

It is unlikely that certification by examination will be put into effect until after demobilization. The government scheme of rehabilitation of medical officers which is now being planned, will make it possible with the active co-operation of medical schools, and the establishment of residencies and assistant residencies in the larger hospitals of Canada, for medical officers to pursue special training to fit them to take the examinations for special certification in their chosen specialty. Detailed requirements for these examinations are now being drawn up and will shortly be made public.

THE CHALLENGE OF ARTHRITIS*

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An article in the November, 1943, number of *The Reader's Digest*, by Paul de Kruif, entitled "Hope for the Victims of Arthritis", even if over-enthusiastic therapeutically, has stimulated a wave of public interest in a chronic disease which has been responsible for much suffering and disability in man over the ages.

Tuberculosis is a disease which we are organized to combat, but to the public and the majority of general practitioners many forms of arthritis are still shrouded in a mediæval cloak of ignorance and superstition.

A recent survey under the auspices of the United States Public Health Service revealed that "rheumatism" affects, in any one year, a greater number of persons than heart disease or arteriosclerosis. The number of persons disabled by arthritic disorders during each year exceeds those affected by diabetes in a ratio of nearly ten to one, tuberculosis ten to one, cancer and tumours seven to one. From the point of view of days lost from work arthritis surpasses injury from accidents. In England, arthritis causes one-sixth of the total industrial disability, and one-sixteenth of all money paid out by England for pensionable invalidity is devoted to arthritis.

Arthritis occurs in a number of different forms depending on various etiological agents. The classification of arthritis would be much simpler if the etiology of the various types were known. Unfortunately in the majority of cases this has not been determined. Roughly speaking, the majority of cases fall into one or another of the following groups:

1. *Infectious arthritis of proved etiology, e.g.,* pneumococcic, meningococcic, gonococcic, streptococcic, staphylococcic, tuberculous, syphilitic.

2. *Probably infectious arthritis, etiology unknown, e.g.,* rheumatic fever and rheumatoid arthritis. Rheumatoid arthritis is probably a chronic infectious disease, and under this heading should be included such clinical variants as Still's disease, Felty's disease, and atrophic arthritis of the spine (Marie-Strümpell disease).

3. *Osteo-arthritis, or degenerative joint disease.* This is generally recognized as a degenerative process which involves both the cartilage and the adjacent bone, and the general impression is that the above-mentioned changes result from prolonged or oft-repeated trauma. This disease is most commonly encountered in over-weight middle-aged or senescent persons, and Heberden's nodes are pathognomonic of the syndrome. Among the rich it seems to cause more disability than in the poor, and the *sine qui non* of successful treatment is a reducing diet with judicious exercise, rest periods and a brave combative spirit.

4. *Gout.*

5. *Arthritis due to direct trauma.*

6. *New growths of joints.*

7. *Hydrarthrosis.*

8. *Periarticular fibrositis.*

9. *Diseases in which arthritis, arthropathy or arthralgia is frequently associated as a symptom.* Acromegaly, allergic states, acute disseminated lupus erythematosus, cyst of meniscus of knee, dermatomyositis, drug intoxication, erythema multiforme exudativum, erythema nodosum, hæmophilia, hysteria, ochronosis, osteo-chrondritis dissecans, osteo-chondromatosis, periarteritis nodosa, psoriasis, purpura, Raynaud's disease, Reiter's disease, scleroderma, serum sickness.

It is readily recognized therefore that there are numerous forms of arthritis, many of which can be cured and the majority improved. More research will probably result in finding the cause of rheumatoid arthritis, and even today the differentiation between rheumatoid arthritis, osteo-arthritis and gout can usually be made by careful clinical history, physical examination and laboratory investigation. Consequently there is no justification for the apathetic attitude towards this matter so often adopted by the busy practitioner. Arthritis is at present a neglected disease and, naturally, offers a rich field for the various quacks and charlatans. But the knowledge at hand is sufficient to help and even cure many patients, and an attempt will be made to summarize this knowledge to the benefit of those suffering from the disease and, indirectly, to the advantage of the medical practitioner, for stimulation of interest in the general practi-

* In subsequent numbers of the *Journal* it is proposed to publish, by the same author, further special articles on "Rheumatoid arthritis", "Osteo-arthritis", and "Gout".

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