
History of Surgery

Histoire de chirurgie

DR. NORMAN BETHUNE AS A SURGEON

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Dr. Norman Bethune's recognition as a Canadian of renown resulted from his devoted work in China during the late 1930s. He had received a general surgical training, but his personal illness with tuberculosis led him to specialize in thoracic surgery. A surgical program at McGill University under Dr. Edward Archibald, a pioneer thoracic surgeon, was initially successful, but by the mid-1930s Bethune was rejected by McGill and Dr. Archibald. He became chief of thoracic surgery at the Hôpital du Sacré-Coeur outside Montreal. He developed thoracic surgical instruments and wrote numerous scientific papers. The outbreak of civil war in Spain in 1937 attracted Bethune to oppose what he viewed as fascist aggression. He went to Spain, where he established the value of mobile blood banking. On his return to Canada in 1937 he became aware of the escalating war between China and Japan. He joined the Chinese communist forces in northern China and spent 18 months doing Herculean mobile war surgery, while improving the state of medical services in primitive, depressing conditions. He died in 1939 at the age of 49 years of septicemia as a result of accidental laceration of his finger during surgery. The Chinese have venerated Norman Bethune and stimulated his memorialization in Canada. His surgical record can be viewed as mixed in quality, but overall his performance remains impressive for its achievement.

C'est à cause de son dévouement en Chine à la fin des années 30 que le D^r Norman Bethune est devenu un Canadien réputé. Il a reçu une formation en chirurgie générale, mais comme il avait lui-même souffert de tuberculose, il s'est spécialisé en chirurgie thoracique. Il a connu du succès au début dans un programme de chirurgie entrepris à l'Université McGill, sous l'égide du D^r Edward Archibald, pionnier de la chirurgie thoracique. Au milieu des années 30, McGill et le D^r Archibald ont toutefois rejeté le D^r Bethune. Il est devenu chef de la chirurgie thoracique à l'Hôpital du Sacré-Coeur, à l'extérieur de Montréal. Il a mis au point des instruments de chirurgie thoracique et produit de nombreuses communications scientifiques. Le déclenchement de la guerre civile en Espagne, en 1937, a attiré le D^r Bethune qui s'opposait à ce qu'il considérait comme une agression fasciste. Il s'est rendu en Espagne où il a démontré la valeur des banques de sang mobiles. À son retour au Canada en 1937, il a appris l'escalade de la guerre entre la Chine et le Japon. Il s'est joint aux forces communistes chinoises dans le nord de la Chine et a passé 18 mois à faire un travail d'hercule dans une unité mobile de chirurgie de campagne tout en améliorant les services médicaux dans des conditions primitives et déprimantes. Il est mort en 1939, à l'âge de 49 ans, d'une septicémie après s'être lacéré accidentellement le doigt au cours d'une intervention chirurgicale. Les Chinois vénèrent Norman Bethune et ce sont eux qui ont fait commémorer sa mémoire au Canada. Son bilan chirurgical peut être considéré comme de qualité mitigée, mais son rendement général demeure impressionnant par ses réalisations.

Very few Canadians have made such an impact on world affairs and history as Dr. Norman Bethune. This is ironic because until 1972 when the rapprochement between China and Canada occurred

he was not well known. However, the persistent curiosity of Chinese delegates led to the declaration of Bethune as a historically important Canadian whose birthplace became a certified memorial in 1976.

THE EARLY YEARS

Born in Gravenhurst, Ont., in 1890 in a Presbyterian manse, Norman Bethune was a rambunctious youth whose conflicting feelings for his

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moralistic, authoritarian father and his evangelistic, possibly unapproachable, mother influenced the development of his personality and may explain his adult zeal for good deeds and clashes with authority.

One of three children, he venerated his grandfather who had been a surgeon and dean of Toronto's Trinity Medical College School. At one point his grandfather had resigned his position at the university in protest over a school regulation that barred non-Anglicans, resulting in a decrease in dues-paying students. Surgical teachers at that time depended on student fees for income.

In 1909 Bethune entered the University of Toronto to study physiology and biochemistry and gained second-class honours. From 1911 to 1912 he worked as a teacher and a lumberjack in the frontier college. He entered the 2nd year of medical school in 1912, but with the outbreak of the First World War in 1914 he volunteered as a stretcher-bearer. He was wounded in France and invalided out in 1915. After his convalescence, he completed a crash course in medicine and graduated with his MD at the University of Toronto in 1916. He joined the Royal Navy and subsequently the early Canadian Air Force. In 1920 he embarked on surgical postgraduate education in England. He worked at the West London Hospital and the Royal Infirmary in Edinburgh. In February 1922 he was admitted to the Fellowship in the Royal College of Surgeons in Edinburgh. The following year he married Frances Penney, the daughter of a conservative Edinburgh family, who had money, a good home and a good reputation. For their honeymoon, they took a continental tour, which included visits to Viennese clinics, but after 6 months of fun Frances's money ran out.

In 1924 Bethune became a physician-surgeon in Detroit, a city that repelled

the young couple. He admitted patients to the Harper Hospital for surgery and taught part-time at what is now Wayne State Medical School. Bethune's practice was slow to develop, and he resorted to barter to get by. Furthermore, his domestic life was hectic and difficult, so much so that in 1925 Frances left for an extended visit to a friend and family. When she returned to Detroit in 1926, Bethune's practice had "taken off."

During this time Bethune experienced unusual fatigue and weight loss, and pulmonary tuberculosis was diagnosed. In October 1926 he left Detroit for Gravenhurst under the care of Dr. Charles Parfitt, and that December he was transferred to the Trudeau Sanatorium in the Adirondack Mountains, where patients received 6 months of care including room, board and medical attention for \$15 a week. His wife initiated divorce proceedings in June 1927.

Bethune was determined to be well. He read Dr. John Alexander's book on surgery of pulmonary tuberculosis and was convinced that an artificial pneumothorax would help him, since he saw little hope for recovery with conservative therapy. After some resistance from the medical staff, a resident physician, Dr. Warren, agreed to give Bethune an artificial pneumothorax with a 65% collapse of his lung. Following this he improved so rapidly that he was discharged on Dec. 10, 1927, and for several years continued to receive pneumothorax refills. His experience with tuberculosis transformed his attitude. He wanted to find something he could do for the human race, "something great," and he avowed he would do it before he died.^{1,2}

THE MONTREAL PERIOD

In April 1928, after a few months of laboratory work, he left for Mon-

treal, where he had been accepted as a thoracic surgical fellow by Dr. Edward Archibald, chairman of the Department of Surgery, McGill University, and surgeon-in-chief of the Royal Victoria Hospital, and himself a former tuberculosis patient and a pioneer in thoracic surgery. Dr. Archibald, a man of great clinical experience, maintained a continuous flow of scientific publications. Bethune not only assisted Archibald but did laboratory research work and taught residents and students. Initially all went well. Bethune wrote that Archibald was "the outstanding figure in chest surgery in America and a most charming fellow."² For his part, Archibald looked upon Bethune as "one of the youngest and most brilliant surgeons on my service."²

Bethune threw himself into his work. He invented various thoracic surgical instruments and contributed 16 scientific articles to various journals, usually on thoracic topics, over an 8-year period. He was now operating on his own patients and had developed a reputation for speed in the name of minimizing shock and duration of anesthesia. Although some colleagues were impressed with this facility and his implicit concern for the patient, others were taken aback by what appeared to be reckless operative technique. A clinical clerk stated: "I became aware that Dr. Bethune's patients had a rocky time recovering from surgery. In spite of our best care, we are losing patients operated on by Dr. Bethune at an unusual rate."² Dr. Arthur Vineberg, a pioneer in myocardial revascularization, recalled an operation at which he assisted Bethune:

He was brilliant . . . and he had technical skills but the kind of technical skill that kills people because he always liked to go too fast. He did a thoracoplasty for Dr. Archibald in front of a lot of sur-

geons and he said "come on, Arthur, we will show them how good we are" and out came three ribs. I said "Norman, this guy is going to bleed to death." "No," he said, "16 minutes from skin to skin" and the guy died.²

Archibald² now began to view Bethune differently. Bethune, he said, "was a leader but a dangerous kind of leader. . . . He is willing to take risks at the patient's expense. . . . He had a superiority complex and he was entirely amoral." At rounds Bethune "would make a legitimate attempt to make an explanation. Then beyond a certain point he was just engaged in the most facetious and mocking sort of comments."² Another friend stated, "he was a bad drinker. . . . He picked arguments and insulted people everywhere we went."² When one of Bethune's patients, who had been considered a good risk, died after a thoracoplasty, Archibald had had enough, and in 1933 Bethune was dismissed from the "Royal Vic" and McGill University.

Shortly after, he was hired by the Hôpital du Sacré-Coeur, just outside Montreal, as their first thoracic surgical specialist (Fig. 1). Ironically, this reflected an earlier endorsement by Archibald in support of Bethune's application. He operated once a week, carrying out 250 procedures annually, and he also trained a younger Francophone surgeon as a thoracic specialist. Between 1933 and 1936 at the hospital, Bethune's activities appeared admirable and praiseworthy. He was probably the first surgeon in the world to carry out bilateral thoracoplasties and the first surgeon in Canada to do a pneumonectomy in a child under 10 years of age.³ In 1932 Bethune became a member of the American Association of Thoracic Surgery, and in 1935 he became a member of its executive).

He had remarried Frances in 1929, but they parted permanently in 1933. After witnessing a riot between police and unemployed demonstrators, he volunteered his free medical services to the Organization for the Unemployed and did the same for a YMCA clinic. He consorted with artists, leftists and intellectuals. He was a man of artistic bent, and he painted pictures, composed stories and wrote poetry. He lived a high life, and women found him attractive.

In 1935 he attended the International Physiological Congress in Leningrad where he toured Russian medical facilities and assessed their management of tuberculosis. When he returned to Montreal, he joined the Canadian Communist Party as a "closed" member, which meant that his membership was kept secret.⁴

He now addressed various organizations such as the Montreal Medical Chirurgical Society and the postgraduate assembly in Memphis, Tenn., where he lauded Russia and socialized medicine, and decried that a physician

should profit from a man's ills. He formed a group called the Montreal Group for the Security of People's Health, which included health professionals of different disciplines. Bethune viewed tuberculosis as a social problem, and he and the group developed a scheme for socialized health care, which they forwarded to political figures and members of the medical profession. The idealistic, detailed plan was ignored, much to Bethune's chagrin and disappointment.

THE SPANISH CIVIL WAR

In 1936 the Spanish Civil War broke out.⁵⁻⁷ Supported by Hitler, Mussolini and the Catholic Church, General Franco led a military uprising after the election of a popular front coalition that included socialists, anarchists and communists. Bethune, burning with a desire to fight fascism, resigned his various hospital appointments, boarded a ship in Quebec armed with medical supplies and in 1936 set out for Spain supported by the Canadian Committee to Aid Spanish Democracy, a group led by Protestant ministers but really staffed by Communists. Bethune did not act as a surgeon but conceived of a plan to initiate a mobile blood bank service that would bring resuscitative transfusion to battlefield field units. Bethune wrote:

We have succeeded in unifying all remaining transfusion units under us. We are serving 100 hospitals and casualty-clearing stations in the front lines of Madrid and 100 kilometres from the front of the sector to central. . . . This is the first unified blood transfusion service in army and medical history. Plans are well under way to supply the entire Spanish anti-fascist army with preserved blood. The "institute" is now operating on a 1,000 kilometre front.²

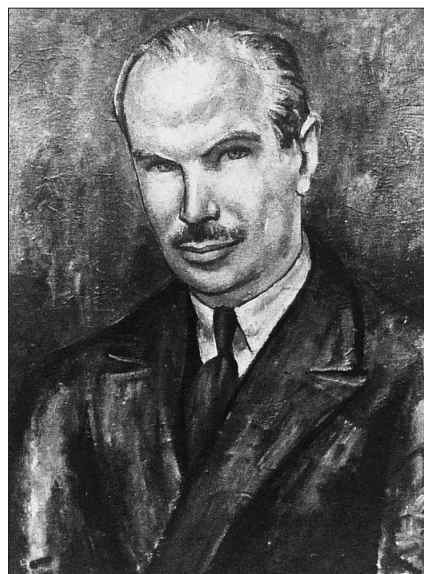


FIG. 1. Norman Bethune, 1934, self-portrait during his 2nd year at Hôpital du Sacré-Coeur. (Courtesy of National Archives of Canada, National Film Board Collection, PA 116909)

The Spanish recognized Bethune's achievement by granting him the highest military rank held by any foreigner in the medical service.² A mobile blood transfusion service was established and organized by Bethune, and he was awarded greater responsibilities for the administration and expansion of the service. This type of blood bank facility became officially sanctioned as an integral part of war surgery during the Second World War and has since become an established tenet of war surgical service. This represents a remarkable contribution.

Bethune, a mercurial, compulsively active man, whose aim was to resuscitate both military and civilian wounded, soon encountered the brutality of an unlimited war endured by the civilian population. He was exposed to frightened and horrified civilians escaping the horrors of war by advancing nationalist troops in the south of Spain. Of this aspect of war Bethune wrote:

The farther we went, the more pitiful the sights became. . . . Thousands of children . . . we counted 5,000 under 10 years of age — at least 1,000 of them barefoot and many of them clad only in a single garment . . . the incessant stream of people became so dense we could barely force the car through them. . . . We were heavily bombed by German and Italian fascist airplanes . . . the moans of the wounded children, shrieks of agonized mothers, curses of the men rose in . . . a pitch of intolerable intensity.²

At that time Bethune had become quite unstable and was drinking heavily, so it was not surprising that he soon came into conflict with Spanish authorities. He became *persona non grata* and was actually escorted home by two Canadian Communists, McLeod and Kashton. In

Canada he was received as a hero by members of the left and embarked on a cross-Canada lecture series to attract financial support for the Spanish Republican cause. After continual denial of his communist affiliation, he admitted membership in July 1937. He was now 47 years old, and his Canadian prospects looked dim. The Japanese capture of Beijing, in August 1937 focused his attention on China. He felt that the Chinese scene was important and once more saw this as a battle against fascist evil. In company with a Chinese-speaking nurse, Jean Ewen, and supported by American friends, Bethune set sail for Hong Kong on New Year's Day 1938.

THE CHINESE CONFLICTS

The China of 1938 presented a complex geopolitical entity.⁸ The Japanese, who had attacked China just a year earlier, were extending their occupation of the country. The Communists and Kuomintang, both committed to a China of greater national pride, had barely settled their serious antagonisms by forging an anti-Japanese front. In Hankow, Bethune met with Chou En-lai and then prepared to travel north to Yen-an where Mao Tse-tung and his communist survivors of the long march were headquartered. McClure, the future moderator of the United Church and medical missionary, found Bethune in T'ungK'uan to warn him of a Japanese intrusion after following the trail of an alcohol-seeking "long nose." McClure reported "he [Bethune] didn't feel himself a Canadian . . . very paranoid about anybody in thoracic surgery . . . they thwarted him . . . very bitter."⁹

The way north was threatened by the Japanese. In Yen-an, Bethune met Mao Tse-tung in his apartment, which

was a cave in the loess hills of that area. Bethune, Ewen and a Canadian missionary, Dr. Richard Brown, formed a mobile medical unit to operate in the border region that the communists were defending against the invading Japanese. Brown and Bethune were immediately occupied with treating the war wounded but took time to deal with civilian problems as well. They renovated and renewed primitive facilities designated as a hospital. After a few months, Brown had to return to his mission duties, leaving Bethune as the only qualified physician for 13 million people. Bethune became saintly, abstemious and dedicated in his work. He moved continuously and wrote, "if I did not have enough work to fill 18 hours a day I would certainly feel discontented." His range of surgery was general and he could report "we did 19 operations amongst 40 seriously wounded . . . 3 fractures of the skull were trephined, 2 amputations of the thigh, 2 perforations of small intestines, half a dozen bad fractures in arms and legs and the rest smaller operations."^{2,3} (Fig. 2).

While Bethune dedicated himself to the care of the war-wounded and injured Red Chinese troops, he quickly recognized that his Chinese colleagues were completely untrained in medicine or nursing and few had any exposure to formal medical training. Yet they were dedicated, intelligent, anxious to serve and aspired to be of aid to suffering mankind. Bethune became their teacher. Every other day from 17:00 to 18:00 he would lecture on the fundamentals of medicine, illustrating this with knowledge of the basic anatomy and physiology of the human body. Bethune wrote: "the personnel . . . should be sent . . . for an intensive two to three month course in surgical nursing and the elements of surgery. . . . These

men returning to the Eighth Route Army (Chinese communists) should be 'seeded' throughout the medical service and will be able to instruct others. . . . This will do for nurses but for doctors other plans should be made." Bethune was conscious of the lack of medical professional assistants and constantly requested Westerners in this capacity. He recommended "the sending away" of selected candidates (doctors) to Russia or to universities in China to be trained as fully qualified doctors. "This would take four to five years . . . they in turn would gradually raise the standard throughout the sanitary service." Trying to remedy these manpower problems, he designed and organized the conversion of a Buddhist temple to a model hospital, planned a medical school for training physicians and submitted a protocol outlining this possibility, and prepared a basic text of information that could be assimilated by youthful peasant soldiers to this end. He was assigned poorly trained individuals as "doctors" whom he respected and

trained and urged greater commitment to education and service.

He worked indefatigably, and his example of commitment was used to inspire the soldiers in military action. He rapidly became fatigued and appeared old. In August 1939 wrote "my health is pretty fair, teeth need attention, one ear has been completely deaf for three months, but apart from being pretty thin I am okay."² On Oct. 28, 1939, while doing an open reduction and fixation of a fractured tibia, he cut himself with an osteotome and several days later operated barehanded on a soldier whose head injury had not been treated for days. An abscess of his finger developed, followed by axillary lymphadenitis and fatal septicemia. He continued to work until Nov. 12, 1939, when he died. He was buried in an American flag because a Union Jack was not at hand.

On his death there was an outpouring of sorrow and mourning in China. A monument and tomb were created in his honour, and there is a Bethune

Peace Hospital and Medical School as commemorative monuments southwest of Beijing. His death was met in Canada by official silence, although in 1943 the Canadian Congress of Labour recommended a living monument be dedicated to the work of Dr. Bethune. This was ignored by Mackenzie King's Liberal government (Fig. 3).

CONCLUSIONS

In 1960 I was assisting the emeritus chairman of the Department of Surgery, University of Toronto, Dr. Robert Janes. We were doing a scalene node biopsy, and Dr. Janes mentioned that a thoracic surgeon had injured the subclavian artery during the procedure and was compelled to do a forequarter amputation and then had the temerity to describe it as an interesting case. "Really, Sir," was my rejoinder. "Yes," Dr. Janes said. "Bethune was his name. Have you ever heard of him?" I said I certainly had. Dr. Janes continued: "poor Norman was a classmate, you know." There was a pause. "A drunkard, you know." Another pause and then Professor Janes concluded: "of such stuff are heroes made." That was a bitter remark but a prophetic one.

In 1979 a conference sponsored by the Bethune Foundation was held at McGill University to recognize the 40th anniversary of Bethune's death. Among the speakers was Dr. H. Rocke Robertson, former chair of the Department of Surgery of McGill as well as its former principal and vice-chancellor. Dr. Robertson was tactful, but his judgement of Bethune was definite when he stated:

I would support Dr. Archibald's view that Bethune's claim to fame should not be based upon his abilities as a thoracic surgeon. . . . I do however have to admit some bias. I was a student of Dr.



FIG. 2. Bethune operating in China in 1939 without gloves or mask. (Reproduced from Stewart R. Bethune, New Press, Toronto, 1973.)

Archibald's. . . . It is entirely possible that the very qualities that caused some of Bethune's colleagues to criticize his work in chest surgery, his speed of hand and decision may have rendered him a superb military surgeon.⁵

Despite the decades that had elapsed since Bethune's death and the clarification of his contributions from both a medical and a social point of view, Dr. Robertson had difficulties giving up the traditionalist, establishment view of Bethune's activities. He may have conceded Bethune his good record as a military surgeon, but only to utilize such faint praise to condemn Bethune's main work as a thoracic surgeon.

The overall evaluation of Bethune as a surgeon is complex and does not comply to a uniform judgement. Surgeons of great academic repute such as Archibald, Janes and Robertson viewed Bethune as an inadequate sur-

geon. Their assessment of Bethune was undoubtedly influenced by their view of him as an immature personality who abused alcohol. Bethune was neither respectable nor predictable. His dismissal from McGill University occurred early in his career as a thoracic surgeon. His subsequent development was affected by his peregrinations in the name of his humanitarian feelings. His record of service at the Hôpital du Sacré-Coeur is unassailable.⁵ He was a man who developed surgical instruments and strove to contribute intellectually to his surgical specialty. His contribution of mobile blood banking, initiated in Spain, was of historical importance. In China he found his epiphany as a surgeon. He finally found the universal admiration for his heartfelt commitment to never-ending work that was only ended by a self-inflicted wound, which bears the inevitable suspicion of a quasi-suicidal "accident" in Freudian terms. He was

unusual and he was unstable, but his life and work proved complex and admirable, showing the fallacy of glib dismissal that is understandable by conventional thinking.

The University of Toronto has recognized Bethune's achievements by placing a plaque in his honour in the foyer of its medical school not too far from a similar plaque commemorating Professor Janes.

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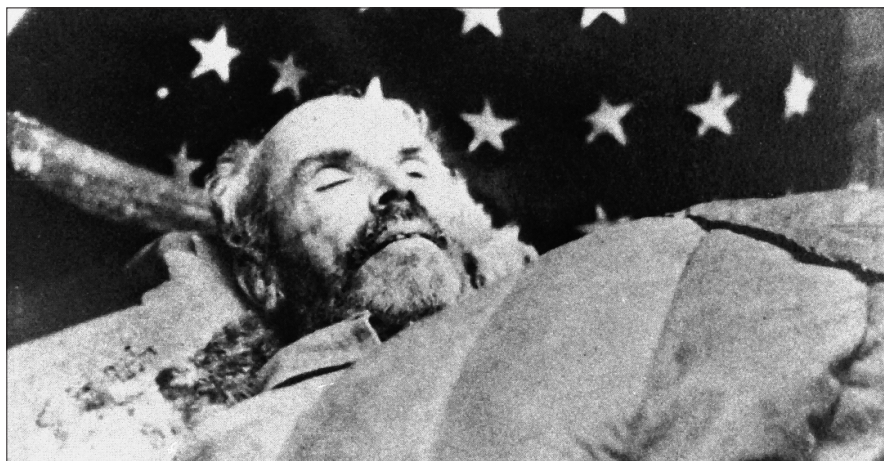


FIG. 3. Bethune dead, with Stars and Stripes in proximity, used because Union Jack was not available. (Reproduced from Stewart R: *Bethune*, New Press, Toronto, 1973.)