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A Collection of Essays Presented at

The First

FRANCES WHITE EWBank COLLOQUIUM

ON

C.S. LEWIS & FRIENDS

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MacDonald and Medicine

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MacDonald and Medicine

by Darrel Hotmire

An overwhelming list of physicians, patients and their ailments appear in George MacDonald's writings. Young Sir Gibbie was a mute street urchin. Wilfred Cumberland had tuberculosis. Diamond was a sickly child who went into several comas. Florimel's father suffered from a broken leg that had become infected. Malcolm's father was a blind piper. Juliet had Pleurisy. Robert Falconer, Paul Faber, Willie MacMichael and his father were all physicians deeply concerned with treating unfortunate victims of poverty and disease. Why were MacDonald's books so filled with maladies and medicine? In order to answer this question we must look at MacDonald's life. To further understand the medicine in his novels, we must also look at the state of the medical field in the time period in which they were written.

MacDonald's interest in medicine started in his youth. Upon entering college his highest marks were in physics and chemistry. It is very likely that he attended medicine and anatomy classes, as students could and did go to any class they desired. In the novel named after him, Alec Forbes attended medicine and

anatomy in addition to his regular classes in mathematics and literature, so it is likely that MacDonald did also (Hein). It was only after MacDonald realized he had insufficient funds to study under the better doctors of his time that his interests in literature, poetry and preaching began to grow. He therefore switched his studies to religion and literature (Phillips).

The medicine that MacDonald was interested in was much different than the medicine of today. The Victorian era marked a period where many changes took place in the practice of medicine. The stethoscope was newly developed, but was looked on by most physicians as having no practical benefit. The timing of the pulse with a wrist watch was not done until this era. The discovery that thermometers could be used on humans was also made in this time period (Darren). These diagnostic tools were not available to the average physician. Diagnosis consisted almost entirely of history, palpation, and observation.

Etiology of maladies and ailments were little understood—the germ theory was proclaimed to the world of Victorian medicine by Joseph Lister only to be laughed at by colleagues.

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Meanwhile, medical schools continued to teach Galen's medieval theory of the plethora of blood as the cause of many ailments (Magner).

Treatments were also much different in Victorian times. Medications were first being developed; however their effectiveness was questionable as it was common practice to use one medication for all ailments. If a pill was found to help scarlet fever, it was also given for consumption, the plague, and measles. In addition, medications were seldom purified, making the quantities of "active ingredients" in pills and elixirs dubious at best. Surgeries were also being developed; however, antiseptic techniques of surgery were scoffed at by most of the world. Bloodletting (or venesection) was the most popular surgery and was used for inflammation, fevers, and a multitude of disease states (Magner). These are some general examples of medicine in MacDonald's time. Specific examples of Victorian medical practices are evident in his writings, especially *Paul Faber, Surgeon*, and *Gutta Percha Willie*.

Dan Hamilton experienced a problem while editing *Paul Faber, Surgeon*. Imagine trying to make the following passage apply meaningfully to the modern reader:

Every thing [about the patient's condition] indicated pleurisy—such that there was no longer room for gentle measures. She must be relieved at once: He must open a vein. In the changed practice of later days it had seldom fallen to the lot of Faber to perform the very simple operation of venesection. A slight tremble of the hand he held acknowledged the intruding sharpness (of the scissors), then the red parabola rose from the

golden bowl. He stroked the arm to help its flow and soon the girl once more opened her eyes and looked at him. Already her breathing was easier.

Statistical evidence presented in the mid 1800's showing the deficiencies of venesection (bloodletting) failed to produce a change in most practicing physicians during most of the Victorian era. However, during the late 1800's the practice began to fall into some disfavor, as indicated in this passage, only to experience a resurgence in the early 1900's (Libby). This passage in *Paul Faber, Surgeon*, is not evidence of MacDonald's insufficient knowledge of medicine. It is merely a reflection of medicine in his lifetime. Incidentally, modern medicine has reinstated the practice of bloodletting through venipuncture. (Removing blood through the use of a needle much like the process of donating blood.) This technique is valuable for certain blood disorders including Hemochromatosis and Polycythemia Rubra Vera.

Another example of Victorian medicine occurs soon after the venesection episode in Paul Faber. Faber's patient experienced a complication to the bloodletting procedure. His patient continued to bleed in spite of adequate dressing of the wound, eventually losing a large amount of blood. MacDonald explains why she experiences the complication:

Hers was one of those peculiar organizations in which, from some cause but dimly conjectured as yet, the blood once set flowing will flow on to death and even the tiniest wound is hard to staunch.

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The modern term for these illnesses are hemophilia's A and B. Macdonald's character most likely had one of these blood disorders.

MacDonald continues this dramatic medical scene by describing the patient's condition after bleeding. Note that his decisions are based solely on observation and palpation. No stethoscope and no blood pressure cuff is used to monitor the depth of her hemorrhagic shock. (a.k.a. blood loss).

In her wrist he discerned no pulse . . . he laid his ear to her heart. Yes; there was certainly the faintest flutter; he watched a moment. Yes; he could see just the faintest tremor of the diaphragm.

Faber's response to his exam is the same as a modern physician's would be; the patient has lost blood; therefore, she needs blood replaced—she needs a transfusion. Modern physicians would, however, differ from his technique:

[Faber to the housekeeper] "Run . . . bring me a syringe." After she brought him the syringe, he first told her to wash it with hot water. Then he quickly opened a vein of his own (with a knife), and held the syringe to catch the spout that followed. When it was full he replaced the piston, telling the housekeeper to put a thumb on his wound, turned the point of the syringe up and drove a little out to get rid of air, then with the help of a probe, inserted the nozzle into the wound and gently forced in the blood. That done he placed his own thumb in the two wounds and made the woman wash

out the syringe in clean hot water . . . this process he went through repeatedly. . . . By the time he had finished, the pulse was perceptible at her wrist. Last of all he bound up his own wound from which had escaped a good deal beyond what he had used. . . . Then a horror seized him at the presumptuousness of the liberty he had taken. What if she would rather have died than have the blood of a man, one she neither loved nor knew, in her veins coursing to her very heart.

In the context of modern medicine, this passage seems almost barbaric, but the amount of detail in this passage leaves little doubt that MacDonald was drawing on his own memory. Perhaps during his university days he had seen a transfusions such as this take place.

Medical transfusions began in 1667 when it was noted that a previously venesectioned feverish boy recovered after receiving a transfusion of lamb's blood. Following this experiment, transfusions increased in popularity and were used for a variety of ailments. There are even reports that several experiments were done using sheep's blood to calm patients who suffered "frenzy." It is obvious that pre-Victorian and Victorian physicians had some interesting ideas about the qualities of blood. It is equally as obvious that they did not understand the dangers of receiving mismatched blood types. In fact, it wasn't until 1930 that the discovery of the four different blood groups (O,A,B, and AB) took place.

Another novel that illustrates the changes in medicine since the Victorian era is the children's novel, *Gutta Percha Willie*. In this novel, father and son physicians become immensely popular, in part due to a mineral

well. The physician father describes the well water: "The salts [the well water] contained could do no one any harm, and might do some people much good; that there was iron in it, which was strengthening."

Water from the well at first helped heal three different maladies of those living close by. It later progressed to a place where people throughout the countryside came to spend seven to ten days drinking the water. Finally on the last page of the novel, the well water is used in a mineral bath house (swimming pool).

This is a good example of medications being used for multiple ailments. Both iron and salts are treatments in modern times for specific illnesses, but are not to be used in excess by all. Iron is one of the main ingredients in prenatal vitamins because pregnant women develop iron deficiency anemia. For people with this anemia, iron does give strength. However it does not benefit people who are not deficient in iron. Salts can also be beneficial and are indicated in certain conditions. This is seen by the amount of salts in the modern formulations of Pedialyte and Gatorade. These are beneficial to dehydrated children and exercising adults, but can be harmful if not used for these specific indications. The use of iron and salts are seen to be beneficial to all in *Gutta Percha Willie*. MacDonald gives us a good example of the Victorian philosophy of medicines working in a general manner in this passage.

MacDonald's writings are remarkable for their preaching and their emphasis on literature and poetry. By looking at the way medicine was practiced in his lifetime, we can also understand better the medical aspects of his novels. In doing this we gain new insight into one of the interests of a great man of God.

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