Patterns in Early Morgellons Disease Considered as Effects of Mercury Exposure

Article · November 2008

CITATIONS
2

READS
474

1 author:

Joseph Keleher
University at Buffalo, The State University of New York
6 PUBLICATIONS **2** CITATIONS

SEE PROFILE

Patterns in Early Morgellons Disease Considered as Effects of Mercury Exposure

© By Joseph W. Keleher, M.A., USA

Abstract

Kellett's 1935 article "Sir Thomas Browne and the Disease Called Morgellons" while giving background and contextual information for Browne's observations also reviews other historic accounts of this condition. The patterns emerging from the documentations suggest a cause/effect relationship with mercury. Recent accounts of Morgellons symptoms are not included as it is uncertain whether historic accounts are documenting the same condition as present day Morgellons.

What is Morgellons?

Morgellons was a name used by Sir Thomas Browne for a condition he had observed in the Languedoc(ke) region of France in the early 1600s. He describes the symptoms as, " … harsh Hairs on their Backs, which takes off the unquiet symptoms of the Disease, and delivers them from coughs and convulsions" (Browne 1674). More recently, Mary Leitao reintroduced Morgellons Disease for a list of symptoms including fibers and "bugs" her son had (DeVita-Raeburn 2007: 1-2).

While the primary characteristics of this mysterious ailment have been the bug or worm crawling sensations and fibers, hairs, or bristles erupting from the skin, there are other symptoms included in the historic documents such as neurological (Browne 1674, Faventinus de Victoriis 1574, Montuus 1558), "fiber" locations (Browne 1674, Crocker 1884: 704, Guillemeau 1635, Pare' 1564; Schenckius 1610) and smell (Guillemeau 1609). When compared with today's accepted symptoms (Oklahoma State University Center for Health Studies is presently studying Morgellons and lists symptoms at: http://healthsciences.okstate.edu.morgellons/ or see the signs and symptoms developed by the Morgellons Research Foundation at http://www.morgellons.org/case.htm), most notably, the historical cases exclude mental manifestations.

Historic Accounts of Morgellons as Presented by Kellett

In 1935 C.E. Kellett, M.D., M.R.C.P. reviewed historic documentation of the Morgellons disease in an article for *Annals of Medical History* titled "Sir Thomas Browne and the Disease Called Morgellons" (Kellett 1935: 467-479). In addition to Browne's account of Morgellons in the Languedoc(ke) region of France, there are other accounts of these symptoms in the same region over a long span of time and suggesting it was common (see Bassignot 1776, Guillemeau 1609, Montuus 1558, and Pare' 1564). Other medical documentations include: Faventinus de Victoriis in 1544, Borelli in 1656, Schenckius in 1610 (Germany), Le Clerc in 1715, and, most surprisingly, Crocker's 1884 account in London.

Crocker's differs because of its later time period, occurrence in London, and unique symptoms related to "group comedones" (Crocker 1884: 704). Because of the uniqueness of Crocker's article and, as there are other references of group comedones in the late 1800s and early 1900s (Adamson 1910: 56-57, Anderson 1874: 81, Bulkley 1912: 69, Hartzell 1917: 686-689, Hazen 1922: 152, Jackson 1914: 154- 157, MacKenna 1923: 386-387, Ormsby & Montgomery 1948: 1308-1309, Sutton 1931: 1086, and Sutton & Sutton 1935: 1150-1151), this will be considered separately.

Patterns in Early Documentation of Morgellons

In viewing the early documentations of Morgellons disease some patterns emerge. The patterns are presented under the more general categories of "Symptom related" and "Population related". While the symptoms give a means to compare to known mercury exposure effects, population information sheds light on the source(s) of probable mercury exposure.

Symptom related-

1) Crawling Sensations-

While none of the early accounts of Morgellons speak specifically of "crawling sensations", nearly all of the documents suggest that the condition is the result of worms.

Descriptions include:

" … throughout the whole body lurk little worms with black heads" (Borelli 1656), " … having the appearance of worms, that are called by the common folk Dracontia" (Faventinus de Victorius 1574), " … bred a certain species of Worms" (Le Clerc 1721), "intercutaneous worm" (Schenckius 1665) and "They never creep entirely out from the pours, but protrude their little heads, which are distinguished as so many black points" (Schenckius 1665).

Ettmuller's (1682) drawings from microscopic observations certainly give credit to the condition being the result of infestation by parasites, however Le Clerc's publication "History of Worms" (1715) supports Leuvenhoeck's later microscopic observations of them being " … Hairs or bundles of Hairs". The worm or hair debate continues for some time. J. D. Wolf writes in his M. D. thesis that, "With the help of the microscope these cinder-coloured animals may be made out, having two horns, round eyes, a tail which is long, forked, with the extremities, which are bent up, covered with hair. These worms are terrible to look at" (Wolf 1789).

While the specifics of the fibers are still debatable, the common interpretation of them being connected in some fashion to worms suggest that a crawling sensations under the skin is present.

2) Fibers-

Ettmuller (1682) and Wolf (1791) among others would have argued that the follicles were the extended portion of worms jutting out from the skin, many define this symptom as hairs or bristles. Among these descriptions are:

"Hairs on their backs" (Browne 1674),"This disease ariseth from small hairs which are scarce of a pins length, but those thick and strong." (Pare' 1678), "Hairs are bred" (Guillemeau 1636) and "hairs or bundles of hairs" (Le Clerc 1721). In some cases the naming of the condition resulted from this symptom " 'the hair affection' (pilaris affectio)" (Montuus 1558) and " … cees … a Provencal term meaning bristles" (Bassignot 1776). To cover both camps on the issue, Schenckius describes them as, "worms or as others would have it hairs" (Schenckius 1665).

Hairs, bristles or fibers appear to be a common symptom of this condition.

3) Neurologic Symptoms-

The following descriptions present a severe type of neurological disorder. They include: " … coughs and convulsions" (Browne 1674), " … above mentioned affliction … is a forerunner of epilepsy" (Montuus 1558), "Epylepticall convulsions" (Guillemeau 1635). Other epileptic references include Victoriis (1610) "epilepsy eventually supervenes" (Montuus 1558), and "They toss up and down being not able to take any rest" (Pare' 1678).

The condition appeared through time to progress into a neurological disorder.

4) Body locations of Morgellon skin symptoms-

There appears to be some patterns in the location of "hair" coming from Morgellons victims and it may suggest carriage through the nervous system. Locations are described as, " … in the muscles of the arms, legs and back" (Schenckius 1610), "On the back" (Browne 1674), " … on children's backs and raines" (Guillemeau 1609), " … pricks their back like thorns" (Pare' 1564), " … relation to the back" (Montuus 1558), " (settle in) muscular parts of the body … the calves especially" (and) " … sometimes occupy the whole of the back, or failing that at least the interscapular region" (Faventinus de Victorius 1574).

The Morgellons fibers appear to have manifested in the muscular areas of arms and legs but especially occurred on the backs (this distribution pattern differs from the later documentations by Crocker and others).

Population related-

The population effected by this condition is suggested by many of the documentations. The Languedoc(ke) region of France was the location of most accounts. Almost universally, this is described as a disease of childhood. There are several documents suggesting women of the population in Languedoc(ke) suffered from it (Gillemeau 1609, Bassignot 1776) and one suggesting men did not (Browne 1674). Kellett notes "The great prevalence of the malady upon the extreme poverty of the people at that time" (Kellett 1935: 474). Clues connected to the distribution, prevalence, and possible source of toxicity are found in the various titles used in naming this condition.

1) Common in the Languedoc(ke) Region-

This condition was often observed in the Languedoc(ke) region of France. There is no doubt that is found regularly through time as Gillemeau (1609) comments, "Women of the countrie of Languedoc(ke), because it is a common disease with them, make no great reckoning of it" and later in his document again presents, "(it is) … verie common in Languedoc(ke)". Over one hundred and fifty years later, Bassignot (1776) makes a similar statement, "(treatment) … done by the women of the district who are so used to recognizing and treating this condition that as a rule they call in neither physician nor surgeon".

From the middle of the 16th century until the 18th century, it appears Languedoc(ke) was infested with this condition.

2) The Disease is Primarily Documented in Infants and Children-

Nearly all of the historic documents related to Morgellons Disease describe it as an illness of childhood. Bassignot (1776) states the condition, "Attacks nearly all the newly born". The other documents clearly state the afflicted as, "Children have worms in the back like hairs" (Borelli 1653), " … not in Men but Children" (Browne 1674), " … happens unto children" (Guillemeau 1635), " … exists in little children" (Faventinus de Victorius 1574),

" … Children afflicted with this Disease" (Le Clerc 1721), "infantile affliction" (Montuus 1558), " … chiefly troubles children" (Pare' 1678) and "(it) … infest infants" (Schenckius 1665).

The aforementioned cases, where women are suggested as having it (Guillemeau 1635, Bassignot 1776) and Browne's (1674) account clearly stating that men did not have it, are significant. Described as effecting the newborn, infants and children, it may be a condition that formed prenatally.

3) Variety of names listed in Kellett (1935)

As refered to already, several names for this condition relate to the "hair" or "bristle" symptom (Montuus 1558, Bassignot 1776). The number and variety of names presented by the documents in Kellett 1935 suggest the condition had a widespread distribution temporally and geographically. The names mentioned in "Sir Thomas Browne and the Disease Called the Morgellons" (1935) include: Morgellons, dracunculus, dracontia, cridones, crinibus, masquelon, Pilaris affectio, crinons, cee's, ceddes, comedones (used both in early history and the later historic accounts in London), Les Crinons, Masclous, masquelons, Morbus pilaris, mescoulo, mousclouroun, Soyes (in Haute- Provence), die zehrende Wurm and mitesser (German), die durzemaden. Further insight is found by sorting these names for the Morgellons Disease.

Kellet suggests that the word Morgellons may be an Anglicized version of masquelons which closely resembles Masclous, mescoulo, and mousclouroun. "Mouscouloun itself means the hook which is attached to the end of the spindle" (Kellett 1935: 471) no doubt a term common to weavers and dyers of fabric.

Pilaris affectio (the hair affection) and Morbus pilaris (sickness of the hair) are of Latin origin and reflect on the condition itself. Schenckius (1665) explains the terms used in Germany, " … die zehrende Wurm For the fact that they seize for themselves and consume the food of the infants they infect" and "mitesser" (German); he also documents, " … die durzemaden which is, "Norumbergian for 'worms that induce wasting'"(Schenckius 1665).

Most interesting of all may be the earliest name documented for this condition—dracontia (Faventinus 1544). In Kellett's (1935) description of Schenckius' (1610) volume, Kellett suggest it is related to or confused with an Arabian condition known as Dracunculus. It could be that either or both of these terms directly related to a dye called "dragon's blood". As explained, "A great degree of confusion existed for the ancients in regards to the source and identity of dragon's blood. Dracaena resin, "true" dragon's blood, and the poisonous mineral cinnabar (mercury sulfide) were often confused by the ancient Romans, as there appears to be a tendency to call all things that are bright red "dragon's blood". ("Dragon's Blood." 6-26-2008.http://en.wikipedia.org/wiki/Dragon's_blood – accessed 8-3-2008). Could it be that the "Arabian" name Dracunculus or the later name of dracontia were a natural result of a connection between exposure to "Dragon's blood" (mercury sulfide) and onset of this condition?

Comedones – Late 1800s/Early 1900s

The later historic case mentioned by Kellett (1935: 473) of Morgellons Disease is Crocker's 1884 documentation of comedones in children. A survey of dermatological text from this era resulted in others with mention of comedones and they are included to discuss patterns. The symptoms appear close in description to the earlier accounts. Differences primarily are in the location(s) of skin symptoms and also in population effected.

Symptom Related Patterns

1) Crawling-

These accounts also lack mention of a crawling sensation being among the symptoms. However, several of the texts mention other condition names, which suggest a living creature of worm, grub or other parasite. Burkley (1912: 69) defines, "Comedo- This represent the little black specks upon the face commonly called blackheads, worms, or grubs" and similarly Jackson (1914: 154) lists, "Comedo … mitesser, hautwurmer, grubs, fleshworms". In several of the texts, claims of comedone occupancy are made. "The so-called 'bottle bacillus' a microorganism … is commonly present (and) other micrococci, particularly the staphylococcus aureus and albus, are found in lesions. An animal parasite, the demodex folliculorum is also a frequent inhabitant of the plugs" (Sutton & Sutton 1935: 1151). Jackson is not nearly so specific with, " … many varieties of microorganisms in comedones" (Jackson 1914: 155-156).

Comedones, whether full of life or barren, indeed do appear to have a symptom one could call a crawling sensation.

2) Fibers-

The fibers, hairs, and bristles of Languedoc(ke) and other earlier accounts are described as such. The comedones appear to consist of plugs. Jackson (1914: 154) describes these as, "Brown or black topped plug(s)" and "worm-like mass(es) that may be a half-inch or more in length". Hartzell mentions similar occurrences along with apparent cause, "Occasionally small black dots resembling comedo at a little distance are formed at the mouth of the follicles as a result of a chemical decomposition when *mercurial* preparations are followed shortly by sulfur, or vice versa" (Hartzell 1917: 689). They are also described as, " … each follicle is plugged with a firm apparently horny plug often having a blackened top" (Adamson 1910: 56).

While the more recent accounts of this skin condition describe a kind of projection from the skin, the common descriptive word among dermatologists was plugs.

3) Body location of skin symptoms-

Most comedones are described as located on the skin in relation to an irritant such as a hatband or shawl. In Crocker (1884: 704) he describes, "The position in most of the boys corresponded with the part where their caps were in closest contact with the skin; naturally suggesting that they had a causative connection". Similar hatband and comedone correlations are presented in Adamson (1910: 57), Sutton & Sutton (1935: 1151), Hazen (1922: 152), and Sutton (1931: 1086). Shawl relationships are also considered an irritant accounting for them " … occur(ing) on the cheeks, forehead, and temples of nurslings, and others of tender years." (Sutton & Sutton 1935: 1150).

Some skin symptoms appear similar to earlier Morgellons Disease accounts. MacKenna (1923: 386) suggests that, "(they) … may occur in groups apart from acne on the back or chest of young children". Some appear as mixed in location, " … upon the face or upon the chest or back" (Adamson 1910: 56) and others are less well defined as in, " … believed to be due to some form of local infection, the exact nature of which is not determined" (Ormsby & Montgomery 1948: 1309).

Population Related

The majority of those suffering appear to be boys which are, " … between three and twelve years old" (Crocker 1884: 704). The oddest description of those suffering occurs in Jackson (1914: 155) as, "More frequent in chlorotic girls than in coal-heavers".

The population most referred to in describing those afflicted with comedones is that of boys.

Symptoms/Side Effects of Mercury Exposure, Ingestion, and Absorption

In reviewing numerous documents related to mercury poisoning, related conditions and symptoms appear on a spectrum from less severe symptoms such as drooling (widely documented when mercury was used medicinally see MacKenna 1929: 15-16) to more severe neurological symptoms like the Dansbury Shakes of hatters in Dansbury, Conneticutt (see http://corrosion-doctors.org/Elements-Toxic/Mercury-mad-hatter.htm) to death such as in the Japanese fishing village of Miamata (Allchin, Douglas, "The Poisoning of Miamata" http://www1.umn.edu/ships/ethics/minamata.htm).

The known symptoms of mercury poisoning are extensive and, " … usually misdiagnosed because of the insidious onset, nonspecific signs and symptoms, and lack of knowledge within the medical profession." Barry M. Diner, M.D. presents known symptoms, means of exposure and some history of this condition (http://www.emedicine.com/EMERG/topic813.htm accessed August 8, 2008). Neurological symptoms appear in various forms possibly due to type of exposure, sensitivity of individual, amount of mercury, and length of exposure.

Side effects were common when mercury was regularly administered for medicinal reasons. A list of possible effects include: "**1**) Salivation, **2**) Nausea, vomiting, diarrhea (which may contain blood) and collapse, **3**) Ulcerative stomatitis. Blue lines on gums, **4**) Fine tremors of arms, hands, and legs, **5**) Nephritis-rarely" (MacKenna 1929:15-16). Medical use of mercury causing skin conditions (eczema mercuriale) was well documented (Anderson 1874: 62, Davis 1913: 102, McKenna 1923:273, Stelwagon 1914: 283, Strickler 1927: 207, Walker 1911: 71,) and other symptoms were documented as well (Mapother 1899: 108-112, Ohmann- Dumesnil 1908: 236-237, Ormsby 1934: 186, Tobias 1956: 470, and Wiener 1947: 267).

Connecting Symptoms and Patterns to Mercury

One pattern of interest that was not yet mentioned was the description by many of the observers that this illness was new. In 1558, Montuus states that the condition was " … A new affliction to infants". Pare' in 1564 confirms this to be true in the Languedoc(ke) area as it was, " … not known to the ancient physicians". Somewhat later in Germany Schenckius (1610) writes it was, " … unknown to old authorities". According to Kellett (1935) in the 1880s of London it is, " … described once more as a new condition". Could the newness of this condition correlate with widespread access to a source of mercury exposure?

Beginning in Languedoc(ke), the documented time period of approximately 1550 until the late 1700s correlates well with the Languedoc(ke) textile industry – especially " … the production of silk weavings and draperies" (Rafael Hyacinthe, Archivist, Archives departementales de l'Herault, 2008: personal communication).

A likely means of mercury exposure would have been cinnabar in use as a textile dye. Cinnabar is "a bright red mineral consisting of mercuric sulphide" (http://www.askoxford.com/concise_oed/cinnabar?view=uk) "Rossetti in the Plictho of 1548 refers to at least two recipes using cinnabar (mercuric sulphide) or vermillion" (John Edmonds, Dye Expert and Author, 2008: personal communication). The early names of Dracunculus (Schenckius 1610) and dracontia (Faventinus 1554) as they relate to "dragons blood" (cinnabar form) may be significant.

The population of Languedoc(ke) most effected were the infants of the economically poor. The lack of men having this condition is likely a reflection on sexual division of labor. Mercury from exposure to cinnabar when dyeing could have been absorbed by a woman's body and carried to her womb and a developing fetus. In the documentation of Minamata, "Mercury would concentrate in a developing fetus, leading to congenital cases, even where the mother showed no signs of the poisoning" (Allchin, Douglas. "The Poisoning of Minamata"http://www1.umn.edu/ships/ethics/minamata.htm. accessed August 3, 2008). The FDA recently released the statement, "Dental amalgams contain mercury which may have neurotoxic effects on the nervous systems of developing children and fetuses". (http://www.fda.gov/cdrh/consumer/amalgams.html) Fitting the general patterns of Languedoc,

the EPA states, "Methylmercury is particularly damaging to developing embryos, which are five to ten times more sensitive than adults" (http://www.usgs.gov/themes/factsheet/146-00/). The later case in Germany (Schenckius 1610) may document the spread, use, and effect of cinnabar in dyeing.

Mercury poisoning has neurological effects as shown in the Miamata "Dancing Cat" syndrome (Allchin, Douglas. "The Poisoning of Minamata"http://www1.umn.edu/ships/ethics/minamata.htm. (accessed August 3, 2008), "Dansbury Shakes"(http://corrosion-doctors.org/Elements-Toxic/Mercury-mad-hatter.htm#Danbury_Shakes), and indigenous children of Northern Quebec (McKeown- Eyssen et. al. 1983: 470-479) as well as numerous effects documented when mercury was used medicinally. Documented side effects of mercury may be viewed from its use as a medicinal in the 1800s and early 1900s. Widely documented effects include; gastrointestinal effects, neurological effects, skin eruptions, halitosis, dental deterioration, and excessive drooling (MacKenna, Robert M. 1929: 15-16, Davis 1913: 102, Stelwagon 1914: 283, MacKenna Robert W. 1923: 273, Strickler 1927: 207, Walker 1911: 71, Evans 1912: 251). The epilepsy like symptoms, skin eruptions in the form of hairs or bristles, the placement of hairs, and the reference of "worms" may be neurological in nature and not parasitic.

Sequeira (1911: 275) defends his use of medicinal mercury, "The drug is well borne by even the youngest of infant … (resulting in the) … presence of snuffles (which) sometimes prevents the child sucking (and he suggests they be fed by spoon)". Similar effects are described in some of the earliest accounts of Morgellons. Bassignot describes the babies' dilemma well as the, "Complete inability to suck, the toungue being unable to fold on itself and grasp the nipple" (Bassignot 1776). An even earlier account states that the babies " … neither sleep nor take their milk" (Borelli 1656). Again, this may be indicative of a neurological disorder.

The hairs and fibers may be the same symptom later documented as "plugs" of the comedones (see photo in Sutton & Sutton 1935: 1151). If they are the same physiological symptom, could they represent the body's attempt to remove toxins?

The comedones of the late 1800s and early 1900s are primarily documented as forming in areas directly touching a hatband (however, see photo in MacKenna 1923: 387). Hats of this time period contained mercury and it could be passed onto the wearer. The connection to shawls may also relate to use of a mercury containing dye. The population of boys from three to twelve being the primary carriers of such conditions may relate to a higher content of mercury in smaller hats.

Morgellons in Today's World

While it is uncertain how many are suffering from the Morgellons symptoms, presently close to 13,000 families are registered with Morgellons.org. I had the condition myself (see Keleher, Joseph W.. "Hell and Back Again" *Explore* 17. 4 (2008), members.cox.net/llyee2/NCS_article_by_joe.pdf . (accessed August 12, 2008).), and followed a holistic approach with this protocol. The "bug" crawling sensations and other symptoms ended (although I still experience a slight electrical zap across the base of my feet on occasion). I will continue detoxifying for some time.

Dr. Amin, who has researched this condition for some time (appropriately named Neurocutaneous Syndrome) suggests that, in some cases, certain dental adhesives may be involved (see Amin, Dr. Omar. "Neurocutaneous Syndrome (NCS)"members.cox.net/llyee/ncs_diagnosis.htm. (accessed August 12, 2008)).

Given the historically documented patterns discussed and the possibility of a mercury connection, further studies are needed. The symptoms described are similar to present day Morgellon's symptoms and future research may determine whether the historically documented is the same as today's.

Currently, there are several funded research organizations studying this disease, including The Morgellons Research Foundation, Oklahoma State University- CHS Center for the Investigation of Morgellons Disease, and The Kaiser Permanente's Northern California Division of Research. Let's hope they can find a permanent cure.

References

Adamson, H. G.. *Skin Afflictions in Childhood.* London: Henry Frowde- Oxford University Press and Hodder & Stroughton- Warwick Square, E.C., 1910.

Allchin, Douglas. "The Poisoning of Minamata"http://www1.umn.edu/ships/ethics/minamata.htm. (accessed August 3, 2008).

Amin, Dr. Omar. "Neurocutaneous Syndrome NCS)"members.cox.net/llyee/ncs_diagnosis.htm. (*Explore! for the Professional*, Volume 10, Number 2).

Anderson, M. *A Practical Treatise Upon Eczema.* London: J & A Churchill, 1874.

http://www.askoxford.com/concise_oed/cinnabar?view=uk

Bassignot, M.. *Hist. et. Mem. Soc. de Med.*. pp.173-176, 1779.

Borelli, P.. *Hist. et obs. cent. prima.* Castris, Colomerius. p. 88, 1653.

Browne, Sir Thomas. *The Works of Sir Thomas Browne.* Geoffrey Keynes. London: Faber & Gwyer, 1931.

Bulkley, Duncan. *Diseases of the Skin.* Paul B. Hoeber, 1912.

Crocker, H. Radcliffe. "Comedones in Children." *The Lancet*, April 19, 1884, 704.

Davis, Haldin. *Skin Diseases in General Practice.* London: Oxford University Press and Hodder & Stoughton, Warwick Square, E.C., 1913.

DeVita-Raeburn, Elizabeth. ""The Morgellons Mystery"*Psychology Today* (MAR/APR 2007), 1-2, http://psychologytoday.com/articles/pto-20070227-000003.xml. (accessed August 4, 2008).

Diner, Barry M.. "Emedicine- Toxicity, Mercuryhttp://www.emedicine.com/EMERG/topic813.htm. (accessed August 8, 2008).

"Dragon's Blood." 6-26-2008.http://en.wikipedia.org/wiki/Dragon's_blood (accessed 8-3-2008).

Edmonds, John, Dye Expert and Author, 2008: personal communication.

Etmuller, *Acta eruditorum. Lipsiae, Grossius.* p. 316, 1682.

Evans,Willmott. *The Diseases of the Skin.* London: University of London Press, 1912.

http://www.fda.gov/cdrh/consumer/amalgams.htm

"The following case definition has been developed by the Medical Advisory Board of the Morgellons Research Foundation." http://www.morgellons.org/case.htm (accessed 4-21-2008).

Fox, Tilbury, M.D.. *Skin Diseases: Their Description, Pathology, Diagnosis, and Treatment.* London: Robert Hardwicke, 192, Picadilly, 1864.

Hartzell, Milton B.. *Diseases of the Skin: Their Pathology and Treatment.* Philadelphia & London: J. B. Lippincott Company, 1917.

Hazen, Henry H.. *Diseases of the Skin.* London: Henry Kimpton, 1922.

Hyacinthe, Rafael, Archivist, Archives departementales de I'Herault, 2008: personal communication.

Evans, Willmott. *The Diseases of the Skin.* London: University of London Press, 1912.

Faventinus de Voctorius, Leonellus. *Practica medicinalis et tractatus de aegritudinibus infantium cum Appedix ad eundem per Georgium Kufnerum Jouniorem.* Lugdun. apud Vencentium: p. 81, cap. XII, 1574.

Guillemeau, J. *The Nursing of Children.* London: Anne Griffin, p. 116, 1635.

Jackson, George Thomas. *The Ready Reference Hand-Book of Diseases of the Skin.* London: Henry Kimpton, 1914.

Keleher, Joseph W.. "Hell and Back Again" *Explore* 17. 4 (2008), members.cox.net/llyee2/NCS_article_by_joe.pdf . (accessed August 12, 2008).

Kellett, C.E.. "Sir Thomas Browne and the Disease Called The Morgellons." *Annals of Medical History*, n.s., VII 1935, 467-479.

Le Clerc, D. *A Natural and Medical History of Worms.* London: Wilcox, p. 280, 1721.

MacKenna, Robert M.. *Aids to Dermatology and Venereal Disease.* London: Bailliere, Tindall & Cox, 1929.

MacKenna, Robert M.. *Diseases of the Skin; A Manual for Students and Practitioners.* London: Bailliere, Tindall & Cox, 1923.

Mapother, E. D.. *Papers on Dermatology and Allied Subjects.* London: Bale, Sons & Danielsson, Limited, Oxford House, 1899.

Mckeown-Eyssen, Gail E. John Ruedy & Alan Neims. "Methyl Mercury Exposure in Northern Quebec: II Neurologic Findings in Children." *American Journal of Epidermiology* 118, no. 4 (1983): 470-479.

Morgellons Research Foundation at http://www.morgellons.org/case.htm (accessed Aug. 8, 2008).

Montuus, H. *de infantum febribus, etc.*. Lugduni, tornaesius & Gazius, p. 13, 1558.

Ohmann-Dumesnil, A. H.. *Diseases of the Skin.* St. Louis: C.V. Mosby Medical Book & Publishing Company, 1908.

Ormsby, Oliver S.. *A Practical Treatise on Diseases of the Skin for the Use of Students and Practitioners.* Philadelphia: Lea & Febiger, 1934.

Ormsby, Oliver S. & Hamilton Montgomery. *Diseases of the Skin.* London: Henry Kimpton, 1948.

"OSU Center for Health Sciences/Morgellons Disease." 2007.http://www.healthsciences.okstate.edu/morgellons/ (accessed Aug. 3, 2008).

Pare, Ambroise. *The Works of That Famous Chirurgeon, Ambroise Parey.* T. N. Johnson. London: Clarke, p. 215, 1678.

Sequeira, James H.. *Diseases of the Skin.* London: J & A Churchill, 1911.

Schenckius, J. *Obs. med. rar. Francfort.* Beyer, p.703, 1665.

Stelwagon, Henry W.. *Treatise on Diseases of the Skin for the Use of Advanced Students and Practitioners.* Philadelphia and London: W. B. Saunders Company, 1914.

Sutton, Richard L. & Richard L. Sutton, jr. *Diseases of the Skin.* London: Henry Kimpton, 1935.

A Study of Chronic Mercurialism in the Hatter's Fur-Cutting Industry. Washington, D.C.: Public Health Bulletin #234, U.S. Gov't Printing Office, 1937.

Strickler, Albert. *Textbook on Diseases of the Skin and Syphilis.* Philadelphia: F. A. Davis Company, 1927.

Sutton, Richard L.. *Diseases of the Skin.* The C. V. Mosby Company, 1931.

Tobias, Norman. *Essentials of Dermatology.* Philadelphia, London, & Montreal: J. B. Lippincott Company, 1956.

Walker, Norman. *An Introduction to Dermatology.* Edinburgh & London: William Green & Sons, 1911.

Wiener, Kurt. *Skin Manifestations of Internal Disorders.* London: Henry Kimpton, 1947.

Wolf, J. G. *Dessertatio inauguralis medica de comedonibus.* Lipsiae, Klaubarthia, 1789.