

DID THE TENTH-CENTURY VIKING EGIL SKALLAGRIMSSON (c. AD 910–990) HAVE PAGET’S DISEASE?

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The extent of Scandinavian domination of the Western Isles and parts of the mainland of Scotland is revealed in place-names, many of which are of Norse origin.^{1,2} The largest settlements of Norsemen to be unearthed were found at Jarlshof in Shetland and at Coileagan an Udal in North Uist.¹ In Lewis, Norse place-names outnumber those of Gaelic origin by four to one, and in Islay by two to one. The Norse referred to the Western Isles as *Sudreyjar*, the ‘Sudreys’ or South Islands;^{3,4} the mainland northern shires settled by the Norsemen still retain their Scandinavian names: *Katanes* (Caithness) meaning ‘headland of the cats’ and *Sudreland*, Southland (Sutherland).⁵ Dingwall is derived from the Norse word *thing*, an assembly, and *Völlr*, an open space.⁵ Many Scottish surnames are of Scandinavian origin, the foremost being MacLeod, from Ljótulf, shortened to Ljótr, meaning ‘ugly’. The two branches of the clan were founded by Tormod and Torquil; the descendants of the former, known as *Síol Tormoid*, held Dunvegan in Skye, while descendants of the latter, *Síol Torcuil*, owned Lewis and Harris.⁶ In her poem *Cumha do Mhac Leoid (Lament for MacLeod)*, Mary MacLeod supports the Norse origin of her clan:⁷

It is my love the stately race
Of the offspring of Olgar and Ochraidh
From the town of Bergen
Was your first title.

Bergen is the only place-name in Scandinavia to survive in Scottish Gaelic, and the only foreign town name to have the definite article. When Norway became independent in 1905 it was the Chief of Clan MacLeod, Sir Reginald MacLeod, who was asked to take the throne of Norway, being the closest descendent of Harald Hardradi (1015–66), King of Norway.

With such associations it is surprising so little was taught in Scottish schools about Norse influence in Scotland, other than the plundering of Iona – the Christian heart of Scotland – in AD 795 and the Battle of Largs in 1263, when the forces of King Hákon IV Hákonsson (1204–63) were defeated by the Scots. The battle is commemorated by the Pencil Monument and effectively ended four centuries of Norse occupation of Scotland.

Perhaps there has been too much emphasis on battles and plundering,^{8–10} and too little on the other achievements of the medieval Scandinavians, especially the splendid Icelandic sagas of the ninth to thirteenth centuries. These include the Vinland Sagas (*Graenlendinga Saga* and *Eirik’s Saga*), which describe the Norse discovery of America.^{11, 12} Of medical interest is *Egil’s Saga*, believed to have been written by Snorri Sturluson (1179–1241) around 1230.¹³

EGIL SKALLAGRIMSSON

Egil’s Saga provides a perspective of the Viking* world in the ninth and tenth centuries. The saga tells the story of a demonic Viking hero, one Egil Skallagrimsson (i.e., son of bald Grim). Egil is described as a huge, dark, bald man of enormous strength and towering temper. He was a fearless fighter who committed his first murder at the age of six while playing a ball game, killing his playmate with an axe. His father, Skallagrim, was displeased with his son’s behavior, but his mother, Bera, considered that ‘Egil had the makings of a real Viking, and it was obvious that as soon as he was old enough he ought to be given fighting ships’.¹³ In a duel over property with one Atli ‘the Short’, Egil aptly demonstrated his ferocity as a fighter:

Egil saw that things couldn’t go on like this. His own shield was useless by this time so he threw away both his shield and sword, made a rush at Atli and grappled with him. He was the stronger and Atli fell backwards. Then Egil leaned over and bit right through his throat, and that was how Atli died.¹³

DRINKING

Like many of the Vikings, Egil was a colossal drinker. On one occasion, when he and his men were being encouraged by their host, one Armod, to drink excessively Egil ‘walked across the floor to Armod, put both hands on his shoulders and pressed him against the pillar, then heaved up a vomit of massive proportions that gushed all over Armod’s face, into his eyes, nostrils and mouth and flooded down his chest so that he was almost suffocated’.

PLUNDERING EXCURSIONS

Egil, like all the Vikings, enjoyed plundering and pillaging, his first such excursion being at the age of 12 to Kurland

* The meaning of the term ‘Viking’ is obscure. It could refer to VIK meaning an inlet or fjord, VIG meaning a battle, or VIKJA meaning ‘to turn aside’, a comment on their wiles and wanderings.

(modern-day Latvia). His mother pronounced proudly that her son was 'of Viking stuff'. However, such plunderings were also associated with commerce, the difference between a Viking 'pirate' and a trader being apparently small. The Vikings were pirates at will and merchants at their pleasure, Egil being no exception. Such an association was also expressed by Mephistopheles in *Faust* by Johann Wolfgang von Goethe (1749–1832):

War, trade and piracy
Are three in one, and can't be separated.¹⁴

Egil was a hard worker and finally settled in Iceland, where he worked a farm at Borg on the west side of the island north of Reykjavik and west of the *thingvellir*, site of Western Europe's first parliament.

POETRY

Egil's saga contains a great deal of his poetry. Even as a youngster he was in no doubt as to his brilliance as a poet:

You'll find no three-year
Babe among bards
More brilliant than me.¹³

Egil wrote a 25-stanza ode on his favorite son's death by drowning called *Sonatorrek* in the year 960 or thereabouts.

DEATH OF EGIL

Egil died in his eighties in Iceland c. 990. Initially, he was given a pagan burial (Christianity did not come to Iceland until AD 1000), but his body was reinterred a decade later at a small church as Mosfell.¹⁵ About a century and a half later, when a more substantial church was built, Egil's bones were once again removed to the new churchyard. The priest Skapti Thorarinsson, 'a man of great intelligence . . . picked up Egil's skull and placed it on the fence of the churchyard'. The description that follows suggests that Egil's skull might have been pagetic:

The skull was an exceptionally large one and its weight was even more remarkable. It was ridged all over like a scallop shell, and Skapti wanted to find out just how thick it was, so he picked up a heavy axe, swung it in one hand and struck as hard as he was able with the reverse side of the axe, trying to break the skull.

But the skull neither broke nor dented on impact, it simply turned white, and from that anybody could guess that the skull wouldn't be easily cracked by small fry while it still had skin and flesh on it.¹³

EVIDENCE OF PAGET'S DISEASE

Byock¹⁵ concluded that the ivory-like hardness of Egil's

skull was strong evidence of Paget's disease. Pagetic bone in the sclerotic phase is avascular and extremely hard to cut. The fact that the skull was 'ridged all over on the outside like a scallop shell'¹³ is also in keeping with the striking corrugation often present in Paget's disease involving the skull.¹⁶ Other causes of increased skull density, such as sclerotic metastases, fluorosis, hypervitaminosis D and chronic hypervitaminosis A, appear unlikely. Polyostotic fibrous dysplasia is less easily excluded, since this disease can cause extensive sclerosis of the skull and exuberant facial bone changes, giving rise to the rare complication of leontiasis ossea. This complication rarely occurs in Paget's disease, which most often only affects the maxilla.¹⁷ Polyostotic fibrous dysplasia affects children from less than ten years of age, whereas Paget's disease begins much later in life, the youngest case reported being at age 18.¹⁸ Egil was described as having ugly features like his father, Skallagrim, which might be interpreted as resulting from pagetic involvement of the facial bones, as suggested by Byock.¹⁵ Paget's disease has been reported to run in families,¹⁹ which might explain the facial disfigurement in Egil and his father; polyostotic fibrous dysplasia, on the other hand, is not familial.²⁰ Moreover, polyostotic fibrous dysplasia involves the long bones, which are liable to fractures, and occurs especially in young individuals.²⁰ Pathological fractures are the most common complication of Paget's disease, although they are not reported in the original description by Sir James Paget,²¹ but occur in later life. Egil is not reported as ever sustaining a fracture despite the many battles he fought. Byock¹⁵ considers the fact that after being struck with the axe Egil's skull 'simply turned white'⁹ at the point of impact as further evidence of Paget's disease, but I have been unable to find a reference to support this.

Patients with Paget's disease of the skull frequently complain of headache and difficulty in holding their heads erect, leading to spasm of the neck muscles. Egil complains in one of his poems of: 'My rock-helm of a head',¹³ and another when he was an old man: 'My bald pate bobs and blunders, I bang it when I fall'.¹³ When he visited King Aethelstan of England, it is recorded that he 'sat bolt upright but his head was bent low'.¹³ These features, as suggested by Byock,¹⁵ are certainly consistent with Paget's disease affecting the skull.

In his old age, Egil's sight and hearing began to fail him, although he remained otherwise active physically. Visual loss is a well-known complication of Paget's disease, either as a result of pressure on the optic nerve²² or rupture of an angioid streak.²³ Hearing loss may result from otosclerosis, although more common is sensorineural deafness due to compression of the eighth nerve.²⁴ However, both impairment of vision and hearing loss can occur as a result of the aging process.

Patients with Paget's disease may experience lethargy

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and fatigue and difficulty in walking due to the progressive paresis of the legs, leading to spastic paraparesis with abnormal bladder and bowel function.²⁵ Egil is reported in the saga as having stumbled and fallen, and he comments: 'I find it hard to control my feet now', but attributes this to the fact that he 'can't see'.¹³ In his old age, Egil also complained of feeling the cold, but this was in the winter.¹³ Byock¹⁵ – wrongly, I think – attributes this to arteriosclerosis and diversion of the blood 'from the extremities to support rapid bone remodeling'. However, the arterial calcification in Paget's disease is of Monckeberg type, which would not be expected to impair the peripheral circulation. When more than 15% of the skeleton is involved with Paget's disease there is an increase in cardiac output, resulting in increased warmth in the extremities.²⁶

Epidemiological studies have shown marked variations in the incidence of Paget's disease in different areas of the world,²⁷ a high prevalence being found in Europe, but it is rare in Iceland²⁸ and Scandinavia.²⁹ Paleopathological studies have documented evidence of the disease in ancient Egyptians,³⁰ Native Americans,³¹ and Anglo-Saxons,^{32,33} but not Scandinavians. Without an X-ray of the skull the verdict as to whether Egil Skallgrímsson had Paget's disease, as suggested by Byock,¹⁵ must be the Scottish one of 'not proven'. However, Paget's disease has been diagnosed in modern-day Iceland.¹⁵

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