Evaluation of Daily Hair Counts

C.-W.	Chull-Wan	Ihm
J.-Y.	Jung-Young	Lee

Seoul

Chull-Wan Ihm, MD; Jung-Young Lee, MD, Department of Dermatology, Chonbuk National University Hospital, Chonju, 560-182, Seoul (Republic of Korea)

67

Dear Sir,

Many dermatologists seem to be embarrassed when they face patients complaining of excessive hair loss without visible thinning of scalp hairs. In such cases the doctors who know that a normal scalp has about 100,000 hairs undergoing three cyclic changes would respond first by saying that scalp hairs are normally shed daily. They would then advise the patient to do daily hair counts to see if the daily shed is greater than the normal upper limit of 100 as defined by present leading textbooks of dermatology [1–4]. If less than 100 hairs are shed, the doctors will triumphantly say to the patient that the number of hair shed is normal and of no cause for concern. Many patients, however, are still not satisfied. I feel that the doctors seem to take advantage of the figure of the upper limit of the normal value of the daily hair loss count because the complaint of patients is always about excessive hair loss, practically never about a decrease in hair loss.

The textbooks which define normal hair loss as up to 100 hairs/day quote the work of Kligman [5]. But Kligman actually stated in this article that more than 90% of individuals lose less than 75 hairs daily, so that higher values warrant suspicion of telogen effluvium. During my clinical experience, daily hair loss of more than 60 could not be simply regarded as 'within the normal

limit'. I think physicians should know the actual distribution of daily hair loss count in normal persons.

Recently I studied daily hair counts of 229 volunteers – 124 males and 105 females. They were medical students, nurses and doctors who were free from any illness, any medication, and any type of alopecia during the study. Their ages were in the 3rd and 4th decades. The volunteers were instructed to collect all the hair that fell out at the first combing of the day. This included hairs on the pillow, comb, brush, shoulders and sink in the morning. Adding of extra hairs, if there were any, collected at another handling of hair during the day were included. These collections were done 2 days after shampooing. The values ranged from less than 10 up to 100. But about 90% of the observed subjects showed a loss of less than 60. All the results are given in table 1.

The mean value of the 229 samples with standard deviation was 34.8 ± 16.7 . With these data we have 99% confidence that the true population mean is between 31.9 and 37.6 inclusive. To help understand the actual distribution of the normal daily hair loss, we present a

0–9 10–19 20–29 30–39 40–49 50–59 60–69 70–79 80–89 90–99

Number of daily hair loss Fig. 1. Histogram of daily hair loss in 229 subjects.

histogram of the results of the 229 subjects (fig. 1). The results agree with Stroud [6] who says that more than 50/day when it is not shampooed is unusual.

Although the daily hair loss count is not an absolute quantification of the presence or absence of disease, it is being used as one of the simple important first steps to evaluate a patient complaining of excessive hair loss without visible lesion. Even though it may be possible to lose as many as 100 hairs/day in normal conditions, when we face patients with a daily hair loss count of, for example, 50 or 60 we should be concerned and should not simply attempt to assure the patient that no disease is present.

Table 1. Results of daily hair loss in 229 persons

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