



CASE REPORT

Beneficial Effect of Lard in Androgenic Alopecia

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Abstract

Back ground: Alopecia is a most psychologically distressing phenomenon occurring in both sexes. Androgenic alopecia (AGA) is the most common form of alopecia affecting millions of people which is an androgen hormone based disorder. Although various medical strategies aimed in treating this disorder but results were only temporary for short period and there was no cure for this. Aim and objective: To evaluate the effect of lard (pig oil) for hair growth in androgenic alopecia. Material and methods: Pig oil were rendered from pork meat purchased from shop for edible purpose. Pig oil was applied topically over the scalp for more than six months to one of the author. Results: The beneficial hair growth promoting activity of pig oil was observed from the different photograph taken at various time points at the baseline, 4 months and 8 months. This study showed that lard has some positive effect on hair growth. Conclusion: This study shows that in a single subject of androgenic alopecia lard has some positive effect on hair growth without any harm on other aspects of healthy living. Key words: androgenic alopecia, pig oil, hair promotion, minoxidil

Key Words

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Introduction

Androgenic alopecia (AGA) commonly known as male pattern baldness is a prevalent disease.^[1] It is a progressive thinning of the hair present in the scalp that follows a defined pattern.^[2,3] The hair follicles, as the baldness progress, becomes shorter, finer, less pigmented by passing through several hair cycles faster than the normal cycle until the large terminal hair follicles turns into a small vellus hair follicles, which is thin with no pigmentation showing growth period much shorter. It follows a characteristic pattern, starting bilaterally backwards from the frontal-temporal region.^[4] The various factors playing role in the baldness were found to be genetic, age, and the male hormones androgen.^[5]

Autosomal dominant inheritance is seen in male pattern baldness. As Androgenic alopecia progresses, seven degrees of male pattern baldness can be distinguished according to Hamilton-Norwood classification.^[6]

Drug therapy available: Drug therapies specifically approved by FDA for treating AGA are limited to minoxidil and finasteride which is also available in combination.^[7] Synthetic drug, minoxidil is a potent vasodilator used initially as an antihypertensive appears safe for long term treatment for hair loss. After 5 years use of various concentration of topical minoxidil (2% and 3%), the improvement has been shown to peak in initial starting one year with a slow decline in regrowth over subsequent



years.^[8] With long term treatment, there was increase in local side effects by use of minoxidil lotion.^[9,10] The various medication used off label for treating baldness were dutasteride, prostaglandin analogues namely F2 alpha derivatives (latanoprost, bimatoprost), ketoconazole, anti-androgens (cyproterone acetate, spironolactone) and various concentration topical estrogen lotions.^[11] The other approaches^[11] include laser treatment, surgical procedures like hair transplantation both of them have their own advantages and the disadvantages including price, postoperative care and usage of the medication for initial 1-2 years with proper caring of the hairs which is troublesome for the working populations.

Experimental study in Wistar rats: An experimental study had shown hair growth promoting activity of the pig oil in wistar rats.^[12] The result of study shows that the complete hair growth was observed after a period of 40 days in normal control wistar rats. The application of test sample lard (Pig oil) and standard Minoxidil solution do not produce any effect when compared to normal control rats on initiation of hair growth (approximately 7 days) while the chronic application of drugs namely test oil and the minoxidil for more than 15 days indicates a decrease in the time interval for complete hair regrowth. The results of topical application of pig oil was found to normalize the growth of hair after 30 days approximately while for group with minoxidil it took more than 35 days for normalization. Thus from the results of the experimental study involving usage of pig oil it had shown that the pig oil had more potency to increase the hair regrowth compared to minoxidil.

Questions addressed : Although some conclusion has been arrived from the animal experiment that lard has a positive role in hair growth, no human evidence is documented in the context of androgenic alopecia. In this work we have topically applied lard on the scalp of a person (one of the author) suffering from androgenic alopecia and studied its effect on hair growth over the period of time.

Material and Methods

Lard (pig oil) preparation: Pork was purchased from market. The oil was rendered by the dry extraction

process in which the pork was fried without water in the oven till the oil was separated and floating in the frying pan. It was found for 1000 g meat around 250 g of oil was collected. The separated oil was collected in a dry cleaned sterilised bottle. No preservatives were added and the oil was stored at room temperature. In normal temperature it was found in solid state like the butter (*Fig 1*).

Study protocol: The one of the author was a diagnosed candidate of androgenic alopecia (class 3V with frontal hairline recession and loss of hair in the crown of the head -Hamilton-Noorwood classification). He applied Minoxidil lotion for 6 months 3 years before but no sustained effect on the baldness has been noticed. Now for around one year he has been applying lard as prepared by above method over his whole scalp before going to bed at night (around 5 g daily) and some effects has been noticed. Observational changes were recorded by using 8 megapixel camera photos focussing the area of crown and vertex from top view. The baseline photo was taken on 12 th June 2012, the second photo was taken on 12th September 2012 and the last photo was taken on January 15th, 2013.

Results

Over the study period there is a sustained growth of hair in the scalp which is also understandable from the scalp photograph. The application of the pig oil appeared to be harmless before the user for all practical purpose. The photographs of the scalp before and after use of the lard are represented here for understanding of the readers (*Fig 2*).

Fig 1. Pig oil (lard) after the dry extraction from pork





Fig 2. Photograph of the scalp at the baseline, 4 months and 8 months



Discussions

This study shows that in a single subject of androgenic alopecia lard has some positive effect on hair growth without any harm on other aspects of healthy living. We understand that from result in a single subject no firm conclusion can be arrived at. But since there is no effective treatment of this widely prevalent disease our preliminary observations warrant a multicentric clinical trial to confirm our finding in a large group of human subjects. In this context it is noteworthy that many internet sites are claiming that lard has some positive effect on hair growth but some scientific study about the matter is lacking as on date that should be done on an urgent basis. We advocate for the same.

New: Easily available pork meat for edible purpose is the source.so it could be the best approach without any known side effects.

Contribution of the Authors

The author has done the study with the help of other authors. All the authors have gone through the final version of the manuscript and analysed it critically.

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