

Case Report

Human infestation with pubic lice

Ankush Maheshwary*

MBBS Student, Mrs. Khushbir Kalra Memorial Hospital, Amritsar, Punjab, India

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***Correspondence:**

Dr. Ankush Maheshwary,

E-mail: ankushmaheshwary@gmail.com

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ABSTRACT

Pediculosis pubis is caused by *Phthirus pubis* (diptera: anoplura) commonly known as crab louse, an obligatory ectoparasite, found on human hair and requires human blood to survive. Pubic lice can be found on pubic hair, underarms, thigh and leg hair, beard and rarely on eyebrows and eyelashes. They are rarely found on scalp hair. Spread of lice occurs mostly by sexual contact but spread via non-sexual contact although rare has also been reported. I present the case of a middle-aged woman with pubic lice. No lice/nits were found in underarm hair, eyebrows or eyelashes. A review of literature is enclosed.

Keywords: *Phthirus pubis*, Pubic lice, Crabs, Permethrin, Presentation, Treatment

INTRODUCTION

There have been archeological and historical evidence of lice infestation in human population for as long as 10,000 years, though occurrence information of pubic lice is scarce as compared to head and body lice. Today pubic lice maintain a worldwide parasitic population infesting 2-10 percent of human population.¹ Highest prevalence of infestation occurs in the range from 15-45 years, within which people are most sexually active, uncommon in developed countries and is typically associated with crowdedness and inadequate sanitary practices.²

Phthirus pubis belongs to the family phthiridae, an obligatory human ectoparasite. The other family of human louse pediculidae includes *pediculus capitis* (head lice) and *pediculus humanus* (body lice).³ Morphologically the abdomen of crab louse is about as wide as or even slightly wider than its length and the second and third pairs of legs (its distinctive crablike appearance) are thicker than the first pair. This is in contrast to head or body lice which are slightly larger and

their abdomen is longer rather than being broad with their six legs being equal in size.⁴

Crab louse is a slow- motion organism adapted to a sedentary life cycle, they are unable to jump or fly and hence mostly transmitted through close contact i.e. sexually although cases of spread via non-sexual contact like toilet seat and shared clothing and bedding are reported.^{4,5} It is frequently reported along with other sexually transmitted diseases. Condoms don't provide protection against transmission.⁶ Life cycle of female louse is 1-3 months. Adult female lays eggs (nits) that adhere at the skin hair junction. A nit may be seen as a small opalescent gray speck connected to hair and hatch in 6-10 days. Nymph then matures to adult within 10-14 days.³

Clinically most patients of pubic lice present with intense itching in the affected area. It may take a week for a patient to develop symptoms after infestation. Black powdery droppings might be noticed in the underwear; some patient might see lice moving although they are small and keep still in light. After lice have fed

development of sky-blue spots (maculae caeruleae, which may last for days and are also characteristic of infestation) or very tiny specks of blood on skin is noticed. Frequent scratching and digging can cause skin to become raw, leading to secondary bacterial infection with enlarged lymph nodes.⁷

It was described the case of lice infestation in a middle-aged woman located exclusively in pubis with irrelevant sexual history.

CASE REPORT

A 45 years old married woman presented with pruritus in the groin region for the past 1 month. The pruritus was severe and caused frequent scratching. Patient was in good health generally with no history of exposure to any contact irritants or vaginal discharge. She was not on any systemic drugs.

On examination, a number of adherent brown concretions were found along the terminal hair of her groin as well as a lot of scratch marks (Figure 1). Moving adult lice could be seen clinically. Microscopic examination confirmed pubis lice. Neither lice nor nits observed at other sites like eyebrows, eyelashes or scalp.



Figure 1: Pubic area showing lice visible to naked eyes.



Figure 2: Black arrow showing mature lice.

A diagnosis of Pediculosis pubis was made (Figure 2). Patient's husband was examined for the same but no lice were found. Both the patient and her husband denied any extramarital sexual contact. No other source of infection could be found. She was advised to shave the area to remove the major chunk of it, additionally advised to wash clothes and bedding according to guidelines and avoid any sexual contact until signs of infestation cease to exist. She was given permethrin 1% cream and second treatment was done 10 days later. The symptoms resolved within 1 month. She was also tested for other sexually transmitted diseases (STDs) which came out to be negative.

DISCUSSION

Pediculosis pubis is caused by infestation with phthirus pubis belonging to the phylum arthropoda; class insecta, the order phthiraptera. About 30% cases are associated with other STDs making it a useful tool in forensic medicine, as in cases of rape and sexual assault, the host DNA can be identified from the blood meal via PCR/gene sequencing.⁸ In children pubic lice found on eyelashes or eyebrows can be a sign of sexual abuse if they haven't shared bed, clothing or towel with a person with infestation.^{4,9} Parasites are 1-3 mm long and have 3 pairs of legs. They can be seen with naked eye and appear as brown gray specks attached to pubic hair base.¹⁰ Apart from pubic hair they can be found on underarm and leg hair, hair on the abdomen and chest and rarely eyebrows and eyelashes.⁷ Cases of scalp hair infestation with pubic lice are rare, as per literature only 20 such cases have been reported so far.¹¹

Adult female lays eggs on hair shaft, which are resistant to mechanical or chemical removal. They lay as many as 26 eggs (up to 3 eggs/day) which hatch every 7-10 days. Average life span of adult lice is less than a month; they die within 24 hours of removal from the host. They interbreed freely within different species.^{4,10}

Pubic lice can be visible to naked eyes but careful examination with magnifying glass may be necessary. Patients are advised to trim all the hair from affected area to remove most of lice and nits after washing thoroughly and drying with a clean towel.

Pharmacological treatment with 1 % permethrin (nix) is considered treatment of choice, applied for 10 minutes and then rinsed.^{12,13} Other over the counter FDA approved pyrethrum group of insecticide (pyrethrin) like 4% piperonyl butoxide - 0.33% pyrethrins (e.g. rid, pronto) is safe and effective.¹² A 0.5 % malathion lotion (oxide) is highly effective in treatment of resistant lice, but has potential for causing respiratory depression if ingested hence not used in neonates and infants. Pyrethrin insecticide are pregnancy category B drugs and safety during breast feeding is unknown.¹² Ivermectin (stromectol) in an oral dose of 200 mcg per kg (not yet approved by FDA) effectively kills nymph and lice but

not eggs. To kill newly hatched nymph a second dose should be given 9-10 days after the first dose.^{12,13}

Clothing, towels and bedding used by the patient within 2-3 days before treatment begun should be machine washed with water at least 55 degree Celsius for 30 min, dried on hot cycle for 5-10 minutes. Items that cannot be washed can be dry cleaned or stored in a sealed plastic bag for 2 weeks.^{4,10}

Finally, all the sexual contacts of patient are informed and examined; family members of the patient are also evaluated. Patient is educated regarding avoidance of intimate sexual contact and evaluated for other sexually transmitted diseases like chlamydia, gonorrhoea.

CONCLUSION

The patient was correctly identified and treated even though a source of infestation was not identified. Pubic lice are often misdiagnosed as irritant or allergic dermatitis. Therefore, careful examination with low threshold for suspicion is necessary for physician along with proper education of the patient to prevent the spread via sexual contact. The treatment is highly effective especially if adult lice are identified, however repeat treatment is often required. The frequent use of lice treatment is known to cause severe itching leading to skin breakdown and secondary bacterial infection.¹⁴

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