

Partial Overview of Benign Skin Lesions

Sevda Önder¹, Havva Erdem², Nurten Turhan Haktanır³, Ali Aslan⁴

¹Department of Dermatology, School of Medicine, Ordu University, Ordu, Turkey

²Department of Pathology, School of Medicine, Ordu University, Ordu, Turkey

³Department of Plastic, Aesthetic and Reconstructive Surgery, School of Medicine, Ordu University, Ordu, Turkey

⁴Department of Physiology, School of Medicine, Ordu University, Ordu, Turkey

Received: 29 August 2018, Accepted 30 August 2018, Published online: 30 August 2018

© Ordu University Institute of Health Sciences, Turkey, 2018

Abstract

Objective: The skin is the largest organ of our body and may develop different benign skin lesions in different periods of life. Benign skin lesions generally cause cosmetic discomfort and morbidity is not high. However, as part of some syndromes they may be precursors of paraneoplastic or metabolic diseases. In this study benign skin lesions frequently sent to Ordu University Faculty of Medicine Pathology Department were analyzed and discussed accompanied by the literature.

Material and Methods: The study included 127 benign skin lesion cases with diagnosis at the pathology laboratory in our center in 2015 and 2016. Preparations were retrospectively re-assessed and current diagnoses recorded. The age, gender and lesion localization of patients included in the study were recorded.

Results: Of cases, 34 had epidermal cyst, 33 had fibroepithelial polyp, 10 had squamous papilloma, 23 had seborrheic keratosis, 18 had trichilemmal cyst and 9 had verruca vulgaris. Of all cases 55.2% were male and 44.8% were female. There were 69 cases (54%) with head and neck localization, and 58 cases (46%) with localization other than the head and neck. Head and neck localization was present for 41% of epidermal cysts, 88% of trichilemmal cysts, all squamous papilloma, 21% of fibroepithelial polyps, 65% of seborrheic keratosis and 77% of verruca vulgaris.

Conclusion: There were higher male patient rates among cases included in the study. According to frequency, locations included the head-neck, trunk, genital region and extremities. Disease was identified in all age ranges. The study concluded that for diagnostic methods to be effective and accurate for benign skin lesions, it is necessary to use pathologic methods.

Key words: Epidermal cyst, fibroepithelial polyp, seborrheic keratosis, squamous papilloma, trichilemmal cyst, verruca vulgaris

Address for correspondence/reprints:

Sevda Önder

Telephone number: +90 (530) 603 53 98

E-mail: drsevdaonder@gmail.com

DOI: 10.19127/mbsjohs.455891

Note: This study was presented at the 26th National Pathology Congress held in Antalya on 02-06 November 2016.

Introduction

Keratinous cysts are benign cystic lesions commonly observed on the skin (Juan, 2004). There are two types of epidermal cyst (EC) and trichilemmal cyst (TC) (Juan, 2004). They may occur on any area of the body. Additionally, they are most commonly observed on the face and scalp in addition to the neck and trunk (Handa, 2002). EC occurs more than two times more often in males compared to females. ECs are mostly observed in the third and fourth decade of life, but may occur at any age (Handa, 2002).

Verruca vulgaris (VV) and squamous papilloma (SP) are lesions associated with human papilloma virus (HPV) (Min Jung, 2010; Murphy, 1997; Premoli-de-Percoco, 1993). VV which contain papillomatous changes may be confused with SP or irritated seborrheic keratosis (SK). In terms of HPV

effect and papillomatous changes, SP, SK and fibroepithelial polyps (FP) should be differentiated. In this situation it may be necessary to perform excision for both differential diagnosis and for cosmetic reasons.

In the literature, the number of studies about benign skin lesions in the Turkish population is low. Additionally, there are limited studies mainly about head-neck localization in the literature. This study investigated cases in our region with the benign skin lesions of EC, TC, SK, SP, FP and VV observed in any area of the body in terms of demographic data and discussed them accompanied by the literature.

Methods

The study included 127 benign skin lesion cases diagnosed at the pathology laboratory in our center in 2015-2016. Preparations were retrospectively re-evaluated and current diagnoses confirmed. The study recorded information about patient age, gender and lesion localization.

Results

Cases comprised 34 EC (Figure-1), 33 FP (Figure-2), 10 SP, 23 SC (Figure-3), 18 TC and 9 VV (Figure-4) cases.

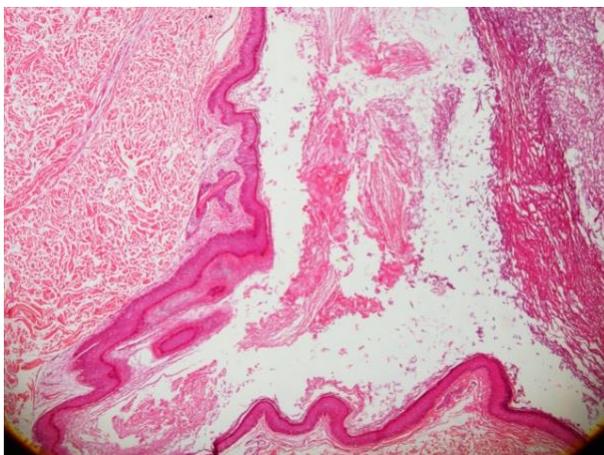


Figure 1. Definite cyst with multi-layered smooth epithelium and granular layer (H&EX40)

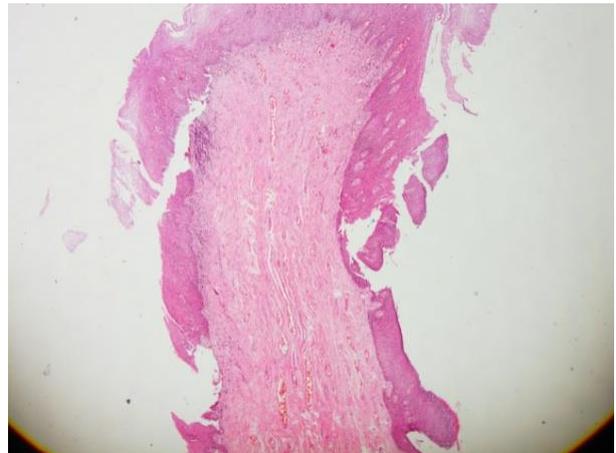


Figure 2. Polypoid mass with multi-layered smooth epithelium containing fibrous stroma (H&EX40)

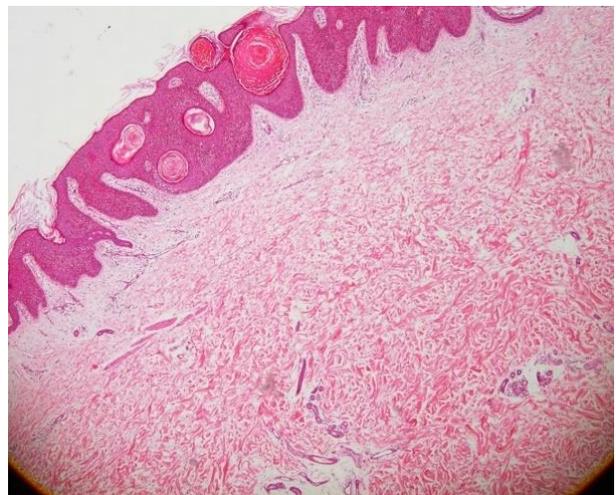


Figure 3. Basal cell proliferation and horn cysts present (H&EX100)

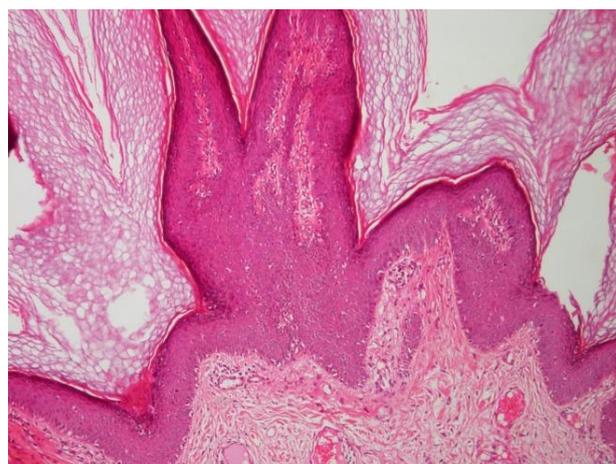


Figure 4. Exophytic papillary appearance and koilocytic appearance (H&EX40)

Of the EC, 14 had head-neck localization (41%), 8 were on extremities, 1 had genital localization and

7 were on the trunk. Twenty-six of the cases were male and 8 were female. The mean age was 45 years, with age distribution varying from 1 to 86 years.

For FP cases, 15 had genital region localization, 7 had head-neck localization (21%), 12 cases had trunk localization and 3 cases had extremity localization. Of cases, 11 were male and 22 were female. The mean age was 48 years, with age distribution varying from 21 to 76.

All SP cases had head-neck localization. There were 2 females and 8 males. The mean age was 50.4 years, with age distribution from 25 to 82 years.

There were 13 female and 10 male SC cases. In terms of localization, 15 were on the head-neck (65%), 5 on the trunk and 4 in the genital region. The mean age was 55 years, with ages ranging from 19 to 79.

Of TC cases, 2 had trunk localization and 16 (88%) had head-neck localization. Mean age was 47 years, with the youngest age 26 and oldest age 70. Of cases, 8 were female and 10 were male.

For VV cases, localization was head-neck for 7 (77%) and extremities for 2 cases with 5 male cases and 4 female cases. The mean age was 49.6 years with age range from 18 to 72.

For all cases there were 55.2% males and 44.8% females. The number with head-neck localization was 69 (54%) with 58 having non-head-neck localization (46%).

Discussion

Cutaneous cysts generally are located on the head-neck and are most commonly observed on the scalp in the head and neck region. In the literature, there are insufficient studies about other localizations and demographic characteristics (Golden, 2005, Al-Khateeb, 2009). This study identified the cutaneous cysts may be observed on different areas of the body in addition to the head and neck. Karabulut et al. in a study of keratinous cysts stated that the most common type located on the scalp was TC and reported there were more women in this group (Karabulut, 2014). The same studies observed TC at 62.8% rates in females and EC at 72% rates in males (Karabulut, 2014). In this study, 41% of EC were located on the head and neck, with 59% located in other areas of the body. For TC 88% were located on the head and neck with 12% located in areas other than the head and neck. Different from literature data showing no difference in gender distributions, the study identified that both keratinous cysts were identified at higher rates in

males. Additionally, the number of males with EC was observed to be much greater (Golden, 2005; Al-Khateeb, 2009). This situation may be explained by the low number of cases in the study and assessing other cutaneous cysts in addition to keratinous cysts. When keratinous cysts are assessed in terms of mean age, it was 42.3 years in the study by Karabulut et al., 29.14 years in the study by Khateeb et al. and 44.1 years in the study by Golden et al. (Golden, 2005; Al-Khateeb, 2009; Karabulut, 2014). In this study, the mean age for EC cases was 45.22 years and for TC cases was 47 years. This situation is not similar to the literature but may be due to the low number of cases and the region of the study.

Fibroepithelial polyps (acrochordon, skin tag, papilloma) are common benign skin tumors associated frequently with obesity and insulin resistance. Some may have stems and others may not (Luba, 2013). Generally, they have diameter of 1-5 cm and are skin-colored. They very rarely reach large dimensions like 20 cm. They are commonly observed in fold regions like the groin, axilla and neck, but more rarely are observed on the external genital organs (Premoli-de-Percoco, 1993; Murphy, 1997; Min Jung, 2010). In this study, in addition to the tendency to occur in fold regions, there was a tendency to be located in the genital region observed. Of fibroepithelial polyp cases, 15 had genital region localization. There were 7 cases with head-neck localization, 12 cases with trunk localization and 3 cases with extremity localization. There was a higher proportion of female cases identified. The ages varied from 21 to 76 years with mean age of 48.85. A study assessing 750 cases identified FP at 46% rates with 25% male and 21% female (Banik, 1987). Differently, in our study female dominance was determined. In the study by Banik et al. (1987) the most common localization was the axilla. The differences may be due to the higher number of cases in this study.

For clinical and histopathologic differential diagnosis of fibroepithelial polyps, intradermal melanocytic nevi, seborrheic keratosis, plexiform neurofibroma, genital or non-genital verruca should be included with definite diagnosis placed with histopathologic investigation (Premoli-de-Percoco, 1993; Murphy, 1997; Min Jung, 2010). Acrochordon-like structures observed in the childhood period may be initial lesions for nevoid basal cell carcinoma syndrome (Luba, 2003).

Squamous cell papilloma are sourced in the squamous epithelium of the epidermis and mucous

membranes. These lesions may reach several centimeters in size and the majority of the time are observed a papillomatous lesions with multiple localizations. These are cutaneous lesions caused by HPV (Janet, 1999; Madueke-Laveaux, 2013.). In this study all had head-neck localization. Of cases, 2 were female and 8 were male with mean age of 50.4 years and age range from 25 to 82 years.

Seborrheic keratosis may occur as multiple lesions increasing in number with advancing age. They may occur on any mucous membrane apart from the hands and sole of the feet, with the most commonly affected areas the face, neck, upper extremities and trunk, especially the upper section of the back (Konishi, 2003). Differential diagnosis of SK should include malignant melanoma, melanocytic nevi, verruca vulgaris, condyloma acuminatum, fibroepithelial polyp, epidermal nevi, actinic keratosis, pigment basal cell carcinoma and squamous cell carcinoma (Roshni, 2007). Treatment of keratosis generally has cosmetic aims, but sometimes is to reduce irritation or to exclude malignancy. Treatment choices for seborrheic keratosis include cryotherapy, curettage, electrocauterization and shave excision (Bologna, 2012; Higgins, 2015).

In this study, there were more female seborrheic keratosis cases compared to males. Of cases 15 had head-neck localization, 5 had trunk and 4 had genital region localization. The age range was from 19 to 79 years with mean age of 55. In the literature there is one study with similar female rates. However, differently the most common localization in this study was the trunk (Yeatman, 1997). This difference may be linked to the evaluation of more than one different lesion in the study.

Verruca vulgaris etiology included hyperkeratotic, exophytic and dome-shaped papules or nodules of human papilloma virus. They are most common on the fingers, dorsal side of the hand and knee and elbow and may be localized to other regions with tendency to trauma though they can occur in any area. There is no effective treatment and the majority of treatment target removing the lesions or inducing a cellular immune response (Bologna, 2012). On histopathology of verruca vulgaris, acanthous, papillomatous, hyperkeratosis, and koilocytic effect in upper epidermis cells is noted for differential diagnosis. The mitotic figures of verruca vulgaris may be observed occasionally (Roshni, 2007). In this study, mitosis was not observed in the cases.

In this study, 7 VV cases (77%) had head-neck localization with 2 extremity cases and 5 male and 4 female cases. Mean age was 49.6 years with age range from 18 to 72. In this study head-neck localization and male gender were more commonly observed in verruca vulgaris cases. A study by Gönül et al. identified verruca cases most commonly had extremity localization and observed male dominance. Different to our study, this study only assessed verruca cases (Gönül, 2015).

In conclusion, the male patient rate was identified to be higher among cases included in the study. In terms of frequency, localization was head-neck, trunk, genital region and extremities. Benign lesions not located on the head-neck were most commonly fibroepithelial polyp, followed by epidermal cyst in second place and seborrheic keratosis in third place. Disease was identified in all age ranges. The study concludes that for diagnostic methods for benign skin lesions to be effective and accurate, it is necessary to use pathologic methods.

Ethics Committee Approval: Ethics committee approval was received for this study from Clinical Research Ethics Committee of Ordu University Medical Faculty.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept- S.Ö, H.E, N.T.H ; Design- A.A, N.TH.; Supervision- S.Ö, H.E ; Funding- H.E.; Materials- N.T.H, S.Ö; Data Collection/Data Process- H.E, A.A.; Analyze or Comment- S.Ö.; Literature Scanning- S.Ö., H.E.; Writer of Paper- S.Ö, H.E.; Critical Review-S.Ö.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study hasn't received no financial support.

References

- Al-Khateeb TH, Al-Masri NM, Al-zoubi F: Cutaneous Cysts of the Head and Neck. *J Oral Maxillofac Surg* 2009; 67: 52-7.
- Banik R, Lubach D. Skin tags: localization and frequencies according to sex and age. *Dermatologica*. 1987; 174(4): 180-3.
- Bologna JL, Jorizzo JL, Rapini RP, editors. *Dermatology*. Sarıcaoğlu H., Bülbül Başkan E., Trans. 2nd ed., Bursa: Nobel; 2012.

- Golden BA, Zide MF: Cutaneous cysts of the head and neck. *J Oral Maxillofac Surg* 2005; 63: 1613-4.
- Gönül M, Unal E, Iyidal AY, Çakmak S, Kılıç A, Gul U, Doner P. Mucocutaneous warts in Middle Anatolia, Turkey: clinical presentations and therapeutic approaches. *Postepy Dermatol Alergol*. 2015; 32(3): 179-83.
- Handa U, Kumar S, Mohan H. Aspiration cytology of epidermoid cyst of terminal phalanx. *Diagn Cytopathol* 2002; 26(4): 266-7.
- Higgins JC, Maher MH, Douglas MS. Diagnosing Common Benign Skin Tumors. *Am Fam Physician* 2015; 92(7): 601-7.
- Janet S, Donna IP, Patricia S, Douglas PS. Oral condylomata in children. *Arch Pediatr Adolesc Med* 1999; 153: 651-4.
- Juan R. Tumors and tumor like conditions of epidermis. Keratinous cyst. *Surgical pathology Rosai and Ackerman's*. 9th ed. Toronto. 2004; 1: 151-204.
- Konishi E, Nakashima Y, Manabe T, Mazaki T, Wada Y. Irritated seb-orrheic keratosis of the external ear canal. *Pathol Int* 2003;53:622-626.
- Luba MC, Bangs SA, Mohler AM, Stulberg DL. Common benign skin tumors. *Am Fam Physician* 2003; 67(4): 729-38.
- Madueke-Laveaux OS, Goqoi R, Stoner G: Giant fibroepithelial stromal polyp of the vulva: largest case reported. *Ann Surg Innov Res* 2013; 7: 8.
- Min Jung Oh, Min Jee Kee, Woo Dae Kang, Seok Mo Kim, Ho Sun Choi: A case of giant fibroepithelial polyp of vulva. *Korean J Obstet Gynecol* 2010; 53: 194-7.
- Murphy GF. The skin. In: Kumar V, Cotran RS, Robbins SL, eds. *Basic Pathology* 6th edn. Philadelphia. W.B. Saunders Company 1997: 697-712.
- Premoli-de-Percoco G, Galindo I, Ramirez JL, Perrone M, Rivera H. Detection of human papillomavirus-related oral verruca vulgaris among Venezuelans. *J Oral Pathol Med* 1993; 22: 113-6.
- Roshni Vora, Y. S. Marfatia. *Indian J Sex Transm Dis* 2007; (28)2: 116-117.
- Yeatman JM, Kilkenny M, Marks R. The prevalence of seborrhoeic keratoses in an Australian population: does exposure to sunlight play a part in their frequency? *Br J Dermatol*. 1997; 137(3): 411-4
- Yuyucu Karabulut Y, Karabulut HH, Dölek Y, Şenel E, Uslu A, Kurşun N. *Turkderm* 2014; 48: 229-33.