

# **BLOOD OTORRHEA: SWEAT BLOOD STAINED EAR DISCHARGES: HEMATOHDROSIS; Four case series (2001 – 2013)**

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## **Abstract**

### **Introduction**

Hematohidrosis/hematidrosis/hemidrosis is a rare clinical condition in which human being sweats blood under condition of extreme physical or emotional stress. The capillary blood vessels that feed the sweat glands ruptures ,causing them to exude blood as sweat,under stressful conditions, occurring in religious (Jesus Christ experience in Getsemane) and non-religious(soldier sweat blood before battle) conditions(1). Few cases has been reported in the 21 century. It is a condition where there is a spontaneous painless bleeding through unbroken skin in any part of the body. It is self-limiting in nature with a good prognosis. The diagnosis of hematohidrosis is made on the presence of bloody discharge without any obvious cause through intact skin, witnessed and confirmed by a medical health professional/doctor and the presence of blood components on biochemistry studies of the discharge. Hematohidrosis is a well-recognised diagnosis; (ICD-9-CM: 705-89).

## **Case report**

This study reports the clinical finding, radiology, audology and histology of four cases of a rare otological hematomidrosis. Our cases are of particular interest because to our knowledge it is the first documented cases of psychogenic hematomidrosis isolated otological (Ear) presentation.

## **Discussion**

A comprehensive literature review was performed on similar reports documenting hematomidrosis/hematidrosis cases. The clinical presentation, diagnosis, treatment, pathophysiology and epidemiology of hematomidrosis. The purpose is to report and raise awareness of hematomidrosis among ENT patients. An episodic spontaneous painless sweaty blood stained ear discharges with intact tympanic membrane is due to hematomidrosis.

### **1. Introduction**

Hematomidrosis is an excretion of blood or blood pigments in the sweat according to Stedman's Medical dictionary, an observation by Aristotle "some sweat with a bloody sweat" (Hist. Animal 111,19)<sup>1</sup>. The reported cases of hematidrosis appeared to be associated with a severe anxiety reaction with fear implicated as the inciting factor. Cases of hematidrosis has been reported in the French literature by Broeg in 1907 and by Darier in 1930; in the British literature in 1918 by Scott, in the German literature by Riecke in 1923, and in the Russian literature by Lavsky in 1932 and by Gadzhiev and Listengarten in 1962<sup>1,2</sup>.

Hematidrosis is a rare condition, of unknown aetiology (sweating blood). Hematomidrosis is actual a medical condition in which extremely high blood pressure causes blood to

seep into sweat glands and escape through pores-illusion of sweating blood<sup>2</sup>.

Vasculitis has also been postulated as a cause of hematidrosis<sup>2-3</sup>. It is a condition where there is a spontaneous bleeding through unbroken skin in any part of the body<sup>3</sup>.

The diagnosis is made by observation of red blood corpuscles (erythrocytes) and other blood components, with no other blood or physical abnormalities found to account for the phenomenon. The documented witnessed on collected by the attending doctor/physician or any other reliable medical personnel of bloody discharge<sup>1-2-3</sup>.

There were no recent literature reports noted of isolated ontological hematohidrosis caes, to our knowledge we are reporting first report.

After my oral presentation entitled “I sweat blood-bloody otorrhea” in our scientific national ENT congress 2003, no one believed my story.. Since 2001 my interest has always been high on bloody otorrhea, hematohidrosis. I received 3 other cases communicated to me by other ENT specialist, with similar presentation. In this community of Gauteng province (RSA) the most stressful, fast life-style situation in Africa. We present four case series since 2001 – 2013. Confirmed by four different senior ENT specialists with similar history of blood stained otorrhea under severe stress with no obvious pathological cause, normal intact tympanic membrane and ear canal. It is possible that other specialists are seeing this phenomenon. I believe other ENT specialist might be seeing same cases. This is written to report and raise an awareness of hematohidrosis among ENT patients.

## **2. CASE SERIES**

### **2.1 PATIENT 1: 2001-2003**

A 30 year old married Black lady, a lawyer by profession, presented with a 6 year history (follow-up) of an intermittent bilateral spontaneous painless non-clotting

bloody discharge from both ears .The episodes lasted for 15-20 minutes duration with 2-5 ml blood stained discharges from each ear per an attack, 2-3 attacks in a week in every 3-4 month interval a total of 8 episodes since 2001-2003 .In the end of 2001 she got married, appointed in a very demanding senior management position in a private company and part-time MBA student (a demanding stressful state). These episodes were usually aggravated by periods of severe mental stresses at work, studies and home. Each episode was preceded by tension like headaches and tiredness then the otorrhea starts like sweat from both ear canals.She said the ears got wet with blood



**FIG 1: BLOOD STAINED EAR DISCHARGE**

stain fluid (Fig 1).Bloody stained (cotton wools) from ears as plugs(Fig 2.a) ,usually at work when there were so much intense stresses. A short period of bed rest in a quiet room helps, discharges stops spontaneously and headaches subsides without

treatment. These episodes were not associated with her menstruations and no history of physical abuse, ear picking, operation, trauma, no bleeding tendencies, or drug abuse (NAIDS), spices intake, no hypertension. On examination evidence of bloody discharge oozing through the floor of intact canal skin and normal looking tympanic membranes, normal hearing, no signs of trauma or infection and no other abnormalities were detected in the rest of the examination and investigations, Radiological (CT Scan, MRI), Audiological (Tympanometry) and blood tests (FBC, Clotting profile, Immunological screening, Biochemistry) all were normal. No obvious pathology was detected to explain the bloody discharge. Microscopic



**FIG 2:** BLOODY STAINED COTTON WOOLS FROM EAR CANAL.

examination (Fig 2.b)cotton bud swab from the ear canal discharge revealed presence of red blood corpuscle (erythrocytes) and other blood components on biochemistry analysis .Examination under anaesthesia, a normal hyperaemic tympanic membrane (Fig 3) and posterior exploratory tympanotomy no evidence of any abnormality, the



**FIG 3: NORMAL TYMPANIC MEMBRANE**

biopsy from the canal skin no evidence of vasculitis.Psychotherapy, reassurance, counselling, bed rest and supportive therapy helped to reduce the frequencies of episodes and the discharges has stopped spontaneously since 2003. The patient is stable and happy to know the diagnosis and that is self-limiting in nature and the exclusion of major pathology reassured her.(by author)

**2.2 PATIENT 2: 2009-2010**

A 26 year old Black female patient presented with history of being under severe stresses no job, no child and not married. She confirmed a complains of having intermittent spontaneous episodes of headaches, wet sweaty blood stained ears discharges(otorrhea) on both ears a total of four episodes in two years. An ENT specialist confirmed the episodes in a state of normal ear canal and tympanic membrane, a bloody stained sweaty discharge, not clotting and watery. These episodes were of unknown cause.(personal communication by an ENT specialist)

**2.3 PATIENT 3: 2010-2011**

A 34 years old Black female presented with spontaneous painless blood stained bilateral ear discharges like sweating when under stress. Two episodes were confirmed by an ENT specialist doctor .On examination there were no obvious cause of this bloody discharge. The patient had a normal external ear canal and intact normal tympanic membrane. A spontaneous resolution of these discharges since 2011. (Personal communication by an ENT specialist)

**2.4 PATIENT 4: 2013**

An 18 year old Black lady, a student under severe stressful situation at school. Peer pressure to perform well at home from family members. She started last month July 2013 to have first episode of spontaneous wet discharges from both ears blood stained (otorrhea). No other pathological explanation of bloody discharge could be found, normal external ear canal, normal intact tympanic membrane. It resolved spontaneously with reassurance by an ENT specialist. (Personal communication by an ENT specialist).

### 3. Discussion

All our patients presented with similar clinical history of sweaty bloody ear discharges without any clear pathological cause. There are three classification types of hematomhidrosis identifiable: Vicarious menstruation, Excessive physical exertion, Psychogenic and unknown types <sup>4</sup> and <sup>5</sup>. Among the cases described it is more common in females mainly from the western hemisphere. The Caucasian race predominates and it may be due to the number of cases of vicarious menstruation <sup>5</sup>.

A vast number have occurred in adults. The bleeding usually starts around a period of intense anxiety or stress (nervous excitement), worry, activity or fear <sup>5</sup>. The bleeding may occur from any area of unbroken skin anywhere in the body and may be unilateral, bilateral or symmetrical. It may be limited to a specific area or generalised <sup>6,7</sup>.

A periodic bleeding corresponding to the menstrual cycles may occur from mucous membranes of stomach, lungs, intestines, mammary glands and external auditory canal has been reported <sup>7</sup>. Our patients presented with isolated otological, ear manifestations only.

Associated symptoms in some patients were reported as severe pain in the areas of bleeding or in areas where bleeding has occurred or no pain whatsoever. Locally the skin may become hyperaemic or there may be no evidence of vascular congestion. The blood may exude from an area of unbroken skin without the patient's knowledge<sup>7,8</sup>.

The amount of blood loss per episode varies but it is usually a small amount <sup>9</sup>. The phenomenon varies during different attacks, it may be regular, intermittent or a single episode. It is usually self-limiting and does not affect the health status of the patient<sup>10</sup>.



#### 4. Conclusion

We are reporting the first cases from South Africa of isolated recurrent otological spontaneous, sporadic hematohidrosis (bilateral painless bloody otorrhea) not associated with menstruation but with severe psychogenic stresses. Management is supportive therapy, reassurance and close observation until spontaneous resolution takes place, this promotes early resolution of the psychogenic sporadic hematohidrosis and wellbeing of the patient. These cases confirm the existence of hematohidrosis in this community among Blacks.

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