

Psychogenic Limb Length Discrepancy of Upper Limbs

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ABSTRACT

Introduction: Body dysmorphic disorder is an obsessive preoccupation that some aspect of one's own appearance is severely flawed. The thoughts are pervasive and intrusive, keeping the person occupied for several hours a day. Limb Length discrepancy is difference in the lengths of the two arms or the two legs. Among the many causes of limb length discrepancy, a very rare cause can be psychogenic. Psychogenic disorders are very common accounting for as high as 9% of neurological admissions but there are no previous reports of apparent limb length discrepancy due to psychogenic factors.

Case report: We present a case report of a girl who after a consultation with a quack for shoulder pain was convinced that her left arm was shorter than right arm. She was diagnosed and treated as Body Dysmorphic Disorder and patient was counselled thoroughly.

Conclusion: Among the many causes of limb length discrepancy, body dysmorphic syndrome or psychogenic limb length discrepancy can be one. Psychogenic disorders are known to cause disturbance in gait and stance but there are no previous reports of apparent limb length discrepancy due to psychogenic factors.

Keywords: Psychogenic, Limb length Discrepancy, Upper limb.

INTRODUCTION

Body dysmorphic disorder (or syndrome) (BDD) is a fairly common psychiatric disorder, affecting about 2% of the population. BDD usually starts during adolescence, and affects both men and women almost equally.¹

It is characterized by an obsessive preoccupation that some aspect of one's own appearance is severely flawed and warrants exceptional measures to hide or fix it.² In BDD's delusional variant, the flaw is imagined. If the flaw is actual, its importance is severely exaggerated. The thoughts are pervasive and intrusive, keeping the person occupied for several hours a day. Besides thinking about it, the patient repetitively checks and compares the perceived flaw, and can adopt unusual routines to avoid social contact that exposes it. Fearing the stigma of vanity, one usually hides the preoccupation. Commonly unsuspected even by psychiatrists, BDD has been greatly underdiagnosed. Severely impairing quality of life via educational and occupational dysfunction and social isolation, BDD involves significant rates of suicide and suicidal ideation.¹

Limb Length Discrepancy (LLD) is differences in the lengths of the two arms or the two legs.

A mild variation between the two sides of the body is fairly common with one-third of the population shows 0.5–1.5-cm disparities, 5% more than 1.5 cm and about 1/1,000 have more than 2 cm LLD requiring treatment if lower limb is involved.³ This is a normal variation and does not affect a patient's well-being and quality of life. Greater differences may need treatment because a significant because of functional problems. Except in extreme cases, arm length differences cause little or no problem

in how the arms function and is rarely noted by patient or others. True LLD can be congenital, developmental and posttraumatic. LLD can be due to bone injury, Bone Infection, juvenile arthritis, Bone Diseases (Dysplasias) and Other Causes like inflammation (arthritis), neurologic conditions and leg length alignment asymmetry (LLAA) etc.⁴

Apparent LLD of upper limbs can be due to angular deformities at shoulder and elbow or bone shaft. It can also be due to problems in neck (neck spasm/torticollis), spine (scoliosis), tilt of pelvis (LLD of lower limbs) all causing a compensatory tilt of shoulders leading to apparent upper limb LLD (Fig. 1).

Psychogenic causes have not been described as a cause of apparent LLD, however psychogenic causes have been noted to cause disorders of stance and gait. Psychogenic disorders are not uncommon accounting for 9% of neurological admissions, with psychogenic disturbance in stance and gait accounting for 1.5% of neurological admissions. In clinical practice, diagnosis relies mainly on the observation of bizarre motor behaviour, discrepancy between obvious dysfunction and normal diagnostic evaluation and evidence of psychiatric abnormalities, but usually diagnosis is very difficult.⁵

However we could not find any literature documenting psychogenic cause of apparent LLD.

CASE REPORT

We present the case report of an 18 year old girl, student by occupation, from rural Kashmir. The patient was a healthy female who complains of pain in Left shoulder for 3 months now.

The pain was sudden in onset and non-progressive. It was moderate in severity and sharp in character and was present throughout the day and was aggravated by movement and relieved by rest and analgesics. There was no history of radiation or referral.

There was no history of trauma, lifting heavy weights or sudden forceful jerks to the arm. There was no history of fever, upper respiratory symptoms, stiffness or pain in other joints. There were no other symptoms associated with musculoskeletal or any other system.

The patient went to a traditional healer who performed some of his practices and some witchdoctory, which involves measuring symmetry of body and correcting any disturbance in symmetry by chants. During this procedure he declared that the left arm of the girl was shorter than the other. This scared the patient and she was taken by her parents to a local practitioner who referred

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her to our orthopaedic hospital. The patient reached us 15 days after visiting the traditional healer.

She came to the emergency department from where she was sent to our ward for thorough evaluation.

The patient complained that her left arm was shorter than the right, but they had just discovered it. The patient as well as her family were preoccupied with the perceived defect of LLD and the patient began avoiding school and socialisation because of her apparent deformity. She began wearing heavy layers of clothes to conceal her perceived deformity and used to spend a lot of time in front of a mirror or otherwise to compare her limbs. Her parents said that she was distressed, irritable and scared during these 15 days. There was no complaints of stiffness, clumsiness, restriction of motion, deformity or swelling in upper limbs. There was no history of pain in upper limbs before these 3 months.

There was no significant antenatal or neonatal history. There was no history of any significant trauma or infections or pus drainage. Developmental milestones were normal.

There was no past medical, surgical, psychological history, drug history, no significant sexual or obstetric history, no history of abuse or traumatic events in her childhood. There was no significant history of recent stressful events. No history or delusions, depression, paranoia, hallucinations etc.

On examination the patient was well oriented, cooperative young female.

General physical examination reveals nothing significant. Systemic examination reveals normal breath and heart sounds and a soft, non-tender abdomen without organomegaly. Local examination of upper limbs: While standing with arms hanging by the sides, the left hand seems to be at a higher level than right hand. In 90 degree of flexion, the left hand was behind the right hand (Fig-2).

There was no point tenderness on shoulders. Range of motion of both shoulders was same and normal in all movements. There were no signs of impingement, tears, tendinitis or instability.

There was no point tenderness on elbows. Range of motion of both elbows was same and normal in all movements. There was no deformity at elbows. Bilateral cubitus angle was 15 degrees.

Spinal examination reveals no tenderness, no steps and normal curves of various segments without any scoliosis. There was normal motion at cervical spine, no deformity, no spasm and no tenderness. Examination of lower limb and pelvis was also normal.

With upper limbs in 90 degree flexion and measuring the distance from suprasternal notch to tips of middle fingers revealed a shortening of 4 cm in left limb.

With limbs hanging by the sides and measuring the distance from C7 spine to tip of middle fingers (apparent length) revealed that left limb was shorter by 8 cm. However on examining the scapulae, it was noted that the left scapula was at a higher level than right but on flexing the arms to 90 degrees or sitting without the arms stretched the scapulae returned to same level.

True length measurement from anterior angle of Acromion to tip of radial styloid process revealed that the length on both sides was 52 cm (Fig-3).

A diagnosis of Body Dysmorphic Disorder was made and patient was counselled thoroughly and was shown that her

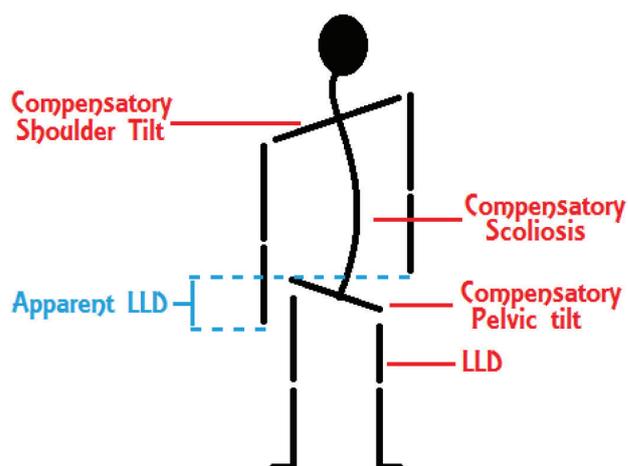


Figure-1: Problems in the tilt of pelvis (caused by LLD of lower limbs), curvature of spine (scoliosis) or neck (neck spasm/torticollis), all cause a tilt of shoulders which in turn leads to apparent upper LLD.



Figure-2: While standing with arms hanging by the sides, the left hand seems to be at a higher level than right hand. In 90 degree of flexion, the left hand was behind the right hand.



Figure-3: True length measurement from anterior angle of Acromion to tip of radial styloid process revealed that the length on both sides was 52 cm.

shoulders were tilted making it look like one of her arms was shorter, and was shown that both of her arms were 52 cm in length.

She was prescribed analgesics and physiotherapy for her shoulder pain and was referred to psychiatrist who managed her on counselling and cognitive and behavioural therapy.

The patient did well on her treatment. She has accepted that her upper limbs are fine and of equal length. Her shoulder pain is also gone now and she appears happy now.

DISCUSSION

The traditional healer measured the symmetry in a crude method by using a string from head to the tip of the fingers. The traditional healer did not take into account the position of neck, shoulders and arms at the time of measurement. And for the measurement of lower limbs they use soft tissue landmarks like umbilicus and nipples which shift and are unpredictable.

People, even educated ones have strong belief in traditional healer and witch doctors, sometimes even more than the belief they have in real doctors. It was noted that the patient was convinced that her left arm was short. And to maintain this delusion, she subconsciously used to shrug left shoulder to get a feeling that her left arm was shorter, and while flexing her arms she used to retract her left shoulder back to get a feeling that her left arm was shorter.

With the attitude she was maintaining and with her heavy layers of clothes, she had fooled the local practitioner as well as our out patient team. But a thorough examination with more exposure revealed the truth. It was a case a body dysmorphic disorder precipitated by an event. Thankfully it was caught early and appropriate treatment helped in speedy and full recovery of the patient. Limb length discrepancy is very common with 30% of population having less than 2 cm of LLD. However significant LLD coming in patient's notice is very rare.³ Psychogenic disorders are known to cause disturbance in gait and stance⁵ but there are no previous reports of apparent limb length discrepancy due to psychogenic factors.

CONCLUSION

Among the many causes of limb length discrepancy, body dysmorphic syndrome or psychogenic limb length discrepancy can be one. Psychogenic disorders are very common accounting for as high as 9% of neurological admissions. We believe psychogenic LLD should be more common in upper limbs than in lower limbs because of the ease in maintaining the needed posture in upper limbs than in lower limbs.

REFERENCES

1. Bjornsson AS, Didie ER and Phillips KA. Body dysmorphic disorder. *Dialogues Clin Neurosci.* 2010; 12:221–32.
2. Cororve, Michelle; Gleaves, David. Body dysmorphic disorder: A review of conceptualizations, assessment, and treatment strategie. *Clinical Psychology Review.* 2001;21:949–970.
3. Guichet JM, Spivak JM, Trouilloud P, Grammont PM. Lower limb-length discrepancy. An epidemiologic study". *Clin Orthop Relat Res.* 1991;272:235–41.
4. Knutson, G. A. Anatomic and functional leg-length inequality: A review and recommendation for clinical decision-making. Part II, the functional or unloaded leg-length asymmetry. *Chiropr Osteopat.* 2005;13:12.
5. Lempert T, Brandt T, Dieterich M, Huppert D. How to identify psychogenic disorders of stance and gait. A video study in 37 patients. *J Neurol.* 1991;238:140–146.

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