

Femoral Neck Stress Fractures and Wolff's Paradigm References

These are the references from the literature review of our ORS 2024 abstract entitled "Femoral Neck Stress Fractures and Wolff's Paradigm", by Brett W. Richards, John T. Cronin, Jamison K Walker, John G. Skedros.

(Botta and Dott; Devas, 1965; Kaltsas, 1981; Aro and Dahlstrom, 1986; Fullerton and Snowdy, 1988; Mendez and Eyster, 1992; Anderson and Greenspan, 1996; Haddad et al., 1997; Shin and Gillingham, 1997; Slocum et al., 1997; Egol et al., 1998; Jimenez, 1999; Lundon et al., 1999; Boden and Osbahr, 2000; Bailie and Lamprecht, 2001; Lassus et al., 2002; Sopov et al., 2002; Bettin et al., 2003; Lee et al., 2003; Muldoon et al., 2003; Peris, 2003; Sanderlin and Raspa, 2003; Lehman and Shah, 2004; Provencher et al., 2004; Hoch et al., 2005; Niva et al., 2005; Newman and Newberg, 2006; Pihlajamaki et al., 2006a; Pihlajamaki et al., 2006b; Sledge III, 2006; Wall and Feller, 2006; Diwanji et al., 2007; Pankaj et al., 2007; Edwards et al., 2008; Ichikawa et al., 2008; Kalaci et al., 2008; Romero and Kohart, 2008; Talbot et al., 2008; Maffulli et al., 2009; Harrast and Colonno, 2010; Kuhn et al., 2010; Coslick et al., 2011; O'Heireamhoin et al., 2011; Cichy et al., 2012; Goolsby et al., 2012; McCormick et al., 2012; Behrens et al., 2013; Malhotra et al., 2013; Monappa et al., 2013; Sen et al., 2013; Florschutz et al., 2015; Goldin et al., 2015; Harris and Chahal, 2015; Kahanov et al., 2015; Sariyilmaz et al., 2015; Sheehan et al., 2015; Webber et al., 2015; Battaglia et al., 2016; Chalupa et al., 2016; McInnis and Ramey, 2016; Moo et al., 2016; Oliveira et al., 2016; Petrin et al., 2016; Ramey et al., 2016; Wu et al., 2016; Zheng et al., 2016; Biz et al., 2017; May et al., 2017; Robertson and Wood, 2017; Ruff, 2017; Seidenberg et al., 2017; Dembowski et al., 2018; Patel et al., 2018; Rohena-Quinquilla et al., 2018a; Rohena-Quinquilla et al., 2018b; Steele et al., 2018; Augat et al., 2019; Fukui et al., 2019; Tabrizi and Mehdizadeh, 2019; Ziesler, 2019; Magar et al., 2020; Song et al., 2020; Tomar et al., 2020; Vedoya et al., 2020; Dutton, 2021; Harris and Le, 2021; Hedge et al., 2021; Kolaczko et al., 2021; Magrini et al., 2021; Nishino et al., 2021; Nowak et al., 2021; Rogers et al., 2021; Vij et al., 2021; Yoon et al., 2021; Bernstein et al., 2022; Borgstrom and McInnis, 2022; Heig et al., 2022; Holtzman et al., 2022; Hwang et al., 2022; Pullen and Safran, 2022; Sakale et al., 2022; Shaw et al., 2022a; Shaw et al., 2022b; Sundkvist et al., 2022; Tagomori et al., 2022; Thelen et al., 2022; Weinrich et al., 2022; Abbott et al., 2023; Alhawas et al., 2023; Arora et al., 2023; Barkley et al., 2023; Kancherla et al., 2023)

- Abbott A, Wang C, Stamm M, Mulcahey MK. 2023. Part I: background and clinical considerations for stress fractures in female military recruits. *Mil Med* 188:86-92.
- Alhawas A, Abahussain M, Alghamdi SG, Alfarhan A. 2023. Completely displaced femoral neck stress fracture in a young male soldier with almost no functional impact: a case report. *Cureus* 15:e33629.
- Anderson MW, Greenspan A. 1996. Stress fractures. *Radiology* 199:1-12.
- Aro H, Dahlstrom S. 1986. Conservative management of distraction-type stress fractures of the femoral neck. *J Bone Joint Surg Br* 68:65-67.

- Arora A, Asnake G, Sonkawade V. 2023. Stress fracture of the femoral neck following total knee arthroplasty: a case series. *Cureus* 15:e36702.
- Augat P, Bliven E, Hackl S. 2019. Biomechanics of femoral neck fractures and implications for fixation. *J Orthop Trauma* 33 Suppl 1:S27-S32.
- Baillie DS, Lamprecht DE. 2001. Bilateral femoral neck stress fractures in an adolescent male runner. A case report. *Am J Sports Med* 29:811-813.
- Barkley C, Wong WK, Knapik JJ, Westrick RB. 2023. The presence of hip joint effusion on MRI is predictive of a grade 4 femoral neck stress injury. *Military Medicine* 188:e1828-e1834.
- Battaglia PJ, D'Angelo K, Kettner NW. 2016. Posterior, lateral, and anterior hip pain due to musculoskeletal origin: a narrative literature review of history, physical examination, and diagnostic imaging. *J Chiropr Med* 15:281-293.
- Behrens SB, Deren ME, Matson A, Fadale PD, Monchik KO. 2013. Stress fractures of the pelvis and legs in athletes: a review. *Sports Health* 5:165-174.
- Bernstein EM, Kelsey TJ, Cochran GK, Deafenbaugh BK, Kuhn KM. 2022. Femoral neck stress fractures: an updated review. *J Am Acad Orthop Surg* 30:302-311.
- Bettin D, Pankalla T, Bohm H, Fuchs S. 2003. Hip pain related to femoral neck stress fracture in a 12-year-old boy performing intensive soccer playing activities--a case report. *Int J Sports Med* 24:593-596.
- Biz C, Berizzi A, Crimi A, Marcato C, Trovarelli G, Ruggieri P. 2017. Management and treatment of femoral neck stress fractures in recreational runners: a report of four cases and review of the literature. *Acta Biomed* 88:96-106.
- Boden BP, Osbahr DC. 2000. High-risk stress fractures: evaluation and treatment. *J Am Acad Orthop Surg* 8:344-353.
- Borgstrom H, McInnis KC. 2022. Female athlete hip injuries: a narrative review. *Clin J Sport Med* 32:62-71.
- Botta DFF, Dott FO. Le fratture da stress del collo femorale: inquadramento e gestione.
- Chalupa RL, Rivera JC, Tennent DJ, Johnson AE. 2016. Correlation between femoral neck shaft angle and surgical management in trainees with femoral neck stress fractures. *US Army Med Dep J*:1-5.
- Cichy B, Roche SJ, Wozniak A. 2012. Atypical femoral neck stress fracture in a marathon runner: a case report and literature review. *Ir J Med Sci* 181:427-429.
- Coslick A, Le MQ, Ritter S, Emam M. 2011. Stress fracture of the hip. In: *PM&R Knowledge Now*.
- Dembowski SC, Tragord BS, Hand AF, Rohena-Quinquilla IR, Lee IE, Thoma DC, Molloy JM. 2018. Injury surveillance and reporting for trainees with bone stress injury: current practices and recommendations. *Mil Med* 183:e455-e461.
- Devas MB. 1965. Stress fractures of the femoral neck. *J Bone Joint Surg Br* 47:728-738.
- Diwanji SR, Kong IK, Cho SG, Seon JK, Yoon TR. 2007. Displaced stress fracture of the femoral neck treated by valgus subtrochanteric osteotomy: 2 case studies. *Am J Sports Med* 35:1567-1570.
- Dutton RA. 2021. Stress fractures of the hip and pelvis. *Clin Sports Med* 40:363-374.
- Edwards WB, Gillette JC, Thomas JM, Derrick TR. 2008. Internal femoral forces and moments during running: implications for stress fracture development. *Clin Biomech (Bristol, Avon)* 23:1269-1278.
- Egol KA, Koval KJ, Kummer F, Frankel VH. 1998. Stress fractures of the femoral neck. *Clin Orthop Relat Res*:72-78.
- Florschutz AV, Langford JR, Haidukewych GJ, Koval KJ. 2015. Femoral neck fractures: current management. *J Orthop Trauma* 29:121-129.
- Fukui K, Kaneuji A, Hirata H, Tsujioka JI, Shioya A, Yamada S, Kawahara N. 2019. Bilateral spontaneous simultaneous femoral neck occult fracture in a middle-aged man due to

- osteoporosis and vitamin D deficiency osteomalacia: A case report and literature review. *Int J Surg Case Rep* 60:358-362.
- Fullerton LR, Jr., Snowdy HA. 1988. Femoral neck stress fractures. *Am J Sports Med* 16:365-377.
- Goldin M, Anderson CN, Fredericson M, Safran MR, Stevens KJ. 2015. Femoral neck stress fractures and imaging features of femoroacetabular impingement. *PM R* 7:584-592.
- Goolsby MA, Barrack MT, Nattiv A. 2012. A displaced femoral neck stress fracture in an amenorrheic adolescent female runner. *Sports Health* 4:352-356.
- Haddad FS, Bann S, Hill RA, Jones DH. 1997. Displaced stress fracture of the femoral neck in an active amenorrhoeic adolescent. *Br J Sports Med* 31:70-72.
- Harrast MA, Colonno D. 2010. Stress fractures in runners. *Clin Sports Med* 29:399-416.
- Harris JD, Chahal J. 2015. Femoral neck stress fractures. *Operative Techniques in Sports Medicine* 23:241-247.
- Harris JD, Le JT. 2021. Stress fractures in sport: hip. In: Robertson GAJ, Maffulli N, editors. *Fractures in Sport*: Springer Cham. p 419-427.
- Hedge G, Thaker S, Botchu R, Fawcett R, Gupta H. 2021. Atraumatic fractures of the femur. *Br J Radiol* 94:20201457.
- Heig T, Mombell K, Deafenbaugh B. 2022. Bilateral atypical tension-sided femoral neck stress fractures in a military recruit. *Mil Med* 187:e527-e529.
- Hoch AZ, Pepper M, Akuthota V. 2005. Stress fractures and knee injuries in runners. *Phys Med Rehabil Clin N Am* 16:749-777.
- Holtzman B, Popp KL, Tenforde AS, Parziale AL, Taylor K, Ackerman KE. 2022. Low energy availability surrogates associated with lower bone mineral density and bone stress injury site. *PM R* 14:587-596.
- Hwang J, Simon V, Rojas D, Mauffrey C, Parry JA. 2022. Bilateral subtrochanteric stress riser fractures following percutaneous screw fixation of femoral neck stress fractures: a literature review and case report. *Eur J Orthop Surg Traumatol* 32:371-376.
- Ichikawa J, Amano R, Haro H, Sato E, Koyama K, Hamada Y. 2008. Fatigue fracture of the bilateral femoral neck in the elderly. *Orthopedics* 31:1141.
- Jimenez CE. 1999. Advantages of diagnostic nuclear medicine: Part 1: Musculoskeletal disorders. *The Physician and sportsmedicine* 27:44-72.
- Kahanov L, Eberman LE, Games KE, Wasik M. 2015. Diagnosis, treatment, and rehabilitation of stress fractures in the lower extremity in runners. *Open Access J Sports Med* 6:87-95.
- Kalaci A, Yanat AN, Sevinc TT, Dogramaci Y. 2008. Insufficiency fractures of both femoral necks in a young adult caused by osteoporosis: a case report. *Arch Orthop Trauma Surg* 128:865-868.
- Kaltsas DS. 1981. Stress fractures of the femoral neck in young adults: a report of seven cases. *J Bone Joint Surg Br* 63-B:33-37.
- Kancherla K, Constantin H, Kanawati A, Graham E. 2023. Iron-induced hypophosphatemic osteomalacia-an atypical case of bilateral femoral stress fractures. *J Am Acad Orthop Surg Glob Res Rev* 7.
- Kolaczko JG, McMellen CJ, Magister SJ, Wetzell RJ. 2021. Comparison of time to healing and major complications after surgical fixation of nondisplaced femoral neck stress fractures: A systematic review. *Injury* 52:647-652.
- Kuhn KM, Riccio AI, Saldua NS, Cassidy J. 2010. Acetabular retroversion in military recruits with femoral neck stress fractures. *Clin Orthop Relat Res* 468:846-851.
- Lassus J, Tulikoura I, Konttinen YT, Salo J, Santavirta S. 2002. Bone stress injuries of the lower extremity: a review. *Acta Orthop Scand* 73:359-368.
- Lee CH, Huang GS, Chao KH, Jean JL, Wu SS. 2003. Surgical treatment of displaced stress fractures of the femoral neck in military recruits: a report of 42 cases. *Arch Orthop Trauma Surg* 123:527-533.

- Lehman RA, Jr., Shah SA. 2004. Tension-sided femoral neck stress fracture in a skeletally immature patient. A case report. *J Bone Joint Surg Am* 86-A:1292-1295.
- Lundon K, Melcher L, Bray K. 1999. Stress fractures in ballet: a twenty-five year review. *Journal of Dance Medicine & Science* 3:101-107.
- Maffulli N, Longo UG, Denaro V. 2009. Femoral neck stress fractures. *Operative Techniques in Sports Medicine* 17:90-93.
- Magar SR, Chand P, Thapa BB, Sinha R, Shah RP, Maharjan D, Shrestha S. 2020. Outcome of surgical treatment of stress fracture neck of femur in military recruits. *Medical Journal of Shree Birendra Hospital* 19:90-96.
- Magrini D, Nussbaum ED, Rizzone KH, Brown NJ. 2021. Femoral neck bone stress injuries in pediatrics and adolescents: diagnosis, etiology, and treatment: current concept review. *Journal of the Pediatric Orthopaedic Society of North America* 3.
- Malhotra R, Meena S, Digge VK. 2013. Tensile type of stress fracture neck of femur: role of teriparatide in the process of healing in a high risk patient for impaired healing of fracture. *Clin Cases Miner Bone Metab* 10:210-212.
- May LA, Chen DC, Bui-Mansfield LT, O'Brien SD. 2017. Rapid magnetic resonance imaging evaluation of femoral neck stress fractures in a U.S. active duty military population. *Mil Med* 182:e1619-e1625.
- McCormick F, Nwachukwu BU, Provencher MT. 2012. Stress fractures in runners. *Clin Sports Med* 31:291-306.
- McInnis KC, Ramey LN. 2016. High-risk stress fractures: Diagnosis and management. *PM R* 8:S113-124.
- Mendez AA, Eyster RL. 1992. Displaced nonunion stress fracture of the femoral neck treated with internal fixation and bone graft. A case report and review of the literature. *Am J Sports Med* 20:230-233.
- Monappa AN, Premjit S, Sujit KT, Sandeep V, Shamsi H, Sharath KR. 2013. Bilateral stress fractures of femoral neck in non-athletes: a report of four cases. *Chinese Journal of Traumatology* 16:113-117.
- Moo IH, Lee YH, Lim KK, Mehta KV. 2016. Bilateral femoral neck stress fractures in military recruits with unilateral hip pain. *J R Army Med Corps* 162:387-390.
- Muldoon MP, Padgett DE, Sweet DE, Deuster PA, Mack GR. 2003. Femoral neck stress fractures and metabolic bone disease. *J Orthop Trauma* 17:S12-16.
- Newman JS, Newberg AH. 2006. MRI of the painful hip in athletes. *Clin Sports Med* 25:613-633.
- Nishino T, Sugaya H, Kikuchi N, Watanabe Y, Mishima H, Yamazaki M. 2021. Bilateral stress fracture of the femoral neck in association with simultaneously developing osteonecrosis of the femoral head: a case report. *J Med Case Rep* 15:607.
- Niva MH, Kiuru MJ, Haataja R, Pihlajamaki HK. 2005. Fatigue injuries of the femur. *J Bone Joint Surg Br* 87:1385-1390.
- Nowak MJ, Schultz DA, Cognetti DJ. 2021. Synovial inclusion cyst mimicking a femoral neck stress fracture in an active duty servicemember: a case report. *JBJS Case Connect* 11:e20 00571.
- O'Heireamhoin S, Baker JF, Neligan M. 2011. Chronic exertional compartment syndrome of the forearm in an elite rower. *Case Rep Orthop* 2011:497854.
- Oliveira US, Labronici PJ, Joao Neto A, Nishimi AY, Pires RE, Silva LH. 2016. Bilateral stress fracture of femoral neck in non-athlete - case report. *Rev Bras Ortop* 51:735-738.
- Pankaj A, Malhotra R, Logani V, Bhan S. 2007. Bilateral femoral neck stress fractures following total knee arthroplasty: a case report and review of literature. *Arch Orthop Trauma Surg* 127:549-552.
- Patel KM, Handal BA, Payne WK. 2018. Early diagnosis of femoral neck stress fractures may decrease incidence of bilateral progression and surgical interventions: A case report and literature review. *Int J Surg Case Rep* 53:189-192.

- Peris P. 2003. Stress fractures. *Best Pract Res Clin Rheumatol* 17:1043-1061.
- Petrin Z, Sinha A, Gupta S, Patel MK. 2016. Young man with sudden severe hip pain secondary to femoral neck stress fracture. *BMJ Case Rep* 2016.
- Pihlajamaki HK, Ruohola JP, Kiuru MJ, Visuri TI. 2006a. Displaced femoral neck fatigue fractures in military recruits. *J Bone Joint Surg Am* 88:1989-1997.
- Pihlajamaki HK, Ruohola JP, Weckstrom M, Kiuru MJ, Visuri TI. 2006b. Long-term outcome of undisplaced fatigue fractures of the femoral neck in young male adults. *J Bone Joint Surg Br* 88:1574-1579.
- Provencher MT, Baldwin AJ, Gorman JD, Gould MT, Shin AY. 2004. Atypical tensile-sided femoral neck stress fractures: the value of magnetic resonance imaging. *Am J Sports Med* 32:1528-1534.
- Pullen WM, Safran M. 2022. Femoral neck stress fractures and avascular necrosis of the femoral head. *Management of Track and Field Injuries*:123-133.
- Ramey LN, McInnis KC, Palmer WE. 2016. Femoral neck stress fracture: can MRI grade help predict return-to-running time? *Am J Sports Med* 44:2122-2129.
- Robertson GA, Wood AM. 2017. Femoral neck stress fractures in sport: a current concepts review. *Sports Med Int Open* 1:E58-E68.
- Rogers NB, Achor TS, Kumaravel M, Gary JL, Munz JW, Choo AM, Routt ML, Jr., Warner SJ. 2021. Implementation of a novel MRI protocol for diagnosing femoral neck fractures in high energy femoral shaft fractures: One year results. *Injury* 52:2390-2394.
- Rohena-Quinquilla IR, Evanson JR, Scully WF, Duchman KR. 2018a. Do all femoral neck stress fractures with effusion on MRI require surgical fixation? *The Journal of Bone and Joint Surgery*.
- Rohena-Quinquilla IR, Rohena-Quinquilla FJ, Scully WF, Evanson JRL. 2018b. Femoral neck stress injuries: analysis of 156 cases in a U.S. military population and proposal of a new MRI classification system. *AJR Am J Roentgenol* 210:601-607.
- Romero AN, Kohart SR. 2008. 19-year-old male adolescent with bilateral femoral neck stress fractures: a case report. *Mil Med* 173:711-713.
- Ruff C. 2017. Mechanical constraints on the hominin pelvis and the "obstetrical dilemma". *Anat Rec (Hoboken)* 300:946-955.
- Sakale H, Yadav SK, Kar BK, Kowshik S, Agrawal AC, Ranjan R. 2022. Pathological fractures of bilateral neck of femur in geriatric population: our experience and review of literature. *J Orthop Case Rep* 12:1-4.
- Sanderlin BW, Raspa RF. 2003. Common stress fractures. *Am Fam Physician* 68:1527-1532.
- Sariyilmaz K, Ozkunt O, Sungur M, Dikici F, Yazicioglu O. 2015. Osteomalacia and coxa vara. An unusual co-existence for femoral neck stress fracture. *Int J Surg Case Rep* 16:137-140.
- Seidenberg PH, Pitzer M, Seifert MK. 2017. Adult hip and pelvis disorders. In: Seidenberg PH, Bowen JD, King DJ, editors. *The Hip and Pelvis in Sports Medicine and Primary Care*: Springer Cham. p 107-142.
- Sen RK, Tripathy SK, Manoharan SR, Chakrabarty S. 2013. Modified valgus osteotomy of the femoral neck for late presenting femoral neck stress fractures in military recruits. *Indian J Orthop* 47:510-514.
- Shaw KA, Hattaway J, Villani N, Barkley C, O'Brien F, Jackson KL, Tucker M. 2022a. Surgically treated femoral neck stress fractures are likely to result in military separation during basic combat training. *Clin Orthop Relat Res* 480:1684-1691.
- Shaw KA, Moreland CM, Hunt TJ, Barkley C, O'Brien F, Jackson KL. 2022b. Femoral neck stress fractures in athletes and the military. *J Bone Joint Surg Am* 104:473-482.
- Sheehan SE, Shyu JY, Weaver MJ, Sodickson AD, Khurana B. 2015. Proximal femoral fractures: what the orthopedic surgeon wants to know. *Radiographics* 35:1563-1584.

- Shin AY, Gillingham BL. 1997. Fatigue fractures of the femoral neck in athletes. *J Am Acad Orthop Surg* 5:293-302.
- Sledge III JB. 2006. Management of femoral neck stress fractures. *Operative Techniques in Sports Medicine* 14:265-269.
- Slocum KA, Gorman JD, Puckett ML, Jones SB. 1997. Resolution of abnormal MR signal intensity in patients with stress fractures of the femoral neck. *AJR Am J Roentgenol* 168:1295-1299.
- Song JH, Kim J, Oh S. 2020. Internal fixation of pauwels type-3 undisplaced-incomplete insufficiency femoral neck fractures with cephalomedullary nails. *Hip Pelvis* 32:105-111.
- Sopov V, Fuchs D, Bar-Meir E, Gorenberg M, Groshar D. 2002. Clinical spectrum of asymptomatic femoral neck abnormal uptake on bone scintigraphy. *J Nucl Med* 43:484-486.
- Steele CE, Cochran G, Renninger C, Deafenbaugh B, Kuhn KM. 2018. Femoral neck stress fractures: MRI risk factors for progression. *J Bone Joint Surg Am* 100:1496-1502.
- Sundkvist J, Moller M, Rogmark C, Wolf O, Mukka S. 2022. Stress fractures of the femoral neck in adults: an observational study on epidemiology, treatment, and reoperations from the Swedish Fracture Register. *Acta Orthop* 93:413-416.
- Tabrizi A, Mehdizadeh M. 2019. Bilateral femoral neck stress fractures in a patient with severe coxa vara, morbid obesity and osteomalacia: a case report. *Journal of Research in Orthopedic Science* 6:0-0.
- Tagomori H, Kaku N, Sato S, Hosoyama T, Tsumura H. 2022. Contemporaneous Insufficiency Fractures of Bilateral Femoral Necks in an Older Patient Taking Bisphosphonate: A Case Report and Literature Review. *Case Rep Orthop* 2022:9294289.
- Talbot JC, Cox G, Townend M, Langham M, Parker PJ. 2008. Femoral neck stress fractures in military personnel--a case series. *J R Army Med Corps* 154:47-50.
- Thelen M, Sutlive T, Traygord B, Robbins D, Schiferl R, Brock B, Demsher K, Godin A, Anstead K. 2022. Demonstration and evaluation of physical examination techniques intended to identify proximal femoral bone stress injuries. *Med J (Ft Sam Houst Tex)*:66-73.
- Tomar L, Govil G, Dhawan P. 2020. Bilateral femoral neck stress fracture in an obese middle-aged female with osteomalacia and coxa-vara managed by simultaneous bilateral total hip arthroplasty. *Cureus* 12:e11478.
- Vedoya SP, Montero A, Del Sel H. 2020. Bilateral concomitant femoral neck stress fracture in a sedentary patient with anorexia nervosa. *Trauma Case Rep* 27:100302.
- Vij N, Ranade AS, Gupte S, Oka GA, Belthur MV. 2021. Tension-sided femoral neck stress fracture in an adolescent with vitamin D deficiency and osteomalacia: a case report. *JBJS Case Connect* 11.
- Wall J, Feller JF. 2006. Imaging of stress fractures in runners. *Clin Sports Med* 25:781-802.
- Webber BJ, Trueblood WE, Tchandja JN, Federinko SP, Cropper TL. 2015. Concurrent bilateral femoral neck stress fractures in a military recruit: a case report. *Mil Med* 180:e134-137.
- Weinrich L, Dahne M, Lindner T, Stockle U, Tsitsilonis S. 2022. Femoral neck stress fracture of a male, healthy marathon runner - case report and literature review. *Z Orthop Unfall* 160:564-571.
- Wu M, Fallon R, Heyworth BE. 2016. Overuse injuries in the pediatric population. *Sports Med Arthrosc Rev* 24:150-158.
- Yoon HK, Ryu YK, Song DG, Yoon BH. 2021. Femoral neck stress fractures in south korean male military recruits. *Clin Orthop Surg* 13:24-29.
- Zheng X, Kang K, Dong J, Gao S. 2016. Bilateral stress fractures of the femoral neck in adults: a case report. *International Journal of Clinical & Experimental Medicine* 9.
- Ziesler CWØ. 2019. Stressfraktur i collum femoris (Master's thesis). In: Medisinsk fakultet. Oslo, Norway: Universitetet I Oslo.

