

CASE REPORT**Coexistence of Peripheral Spondyloarthritis and Familial Adenomatous Polyposis: A Rare Case Report with Treatment Contradictions and Review of the Literature****Berna URKMEZ^{1*}, Muge KEPEKCI¹, Sevde Ozer POSUL¹, Aylin REZVANI¹****OPEN ACCESS**

Citation: Berna URKMEZ, Muge KEPEKCI, Sevde Ozer POSUL, Aylin REZVANI. . Analysis and Economic Implication of X-Ray Film Reject in Diagnostic Radiology Department of Jimma University Specialized Hospital, Southwest Ethiopia. *J Health Sci* 2017;27(4):441. doi: <http://dx.doi.org/10.4314/ejhs.v27i4.16>

Received: February 21, 2017

Accepted: February 23, 2017

Published: July 1, 2017

Copyright: © 2017 Berna U., *et al.* This is an open access article distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Funding: Nil.

Competing Interests: The authors declare that this manuscript was approved by all authors in its form and that no competing interest exists.

Affiliation and Correspondence:

¹Department of Physical Therapy and Rehabilitation, Bezmialem University, Istanbul, Turkey

*Email: drbernaurkmez@gmail.com

ABSTRACT

BACKGROUND: *The coexistence of familial adenomatous polyposis and spondyloarthritis is rarely defined in literature. The primary aim of this presentation is to report a development of peripheral arthritis in 3 years following colon surgery with the diagnosis of familial adenomatous polyposis (FAP). The secondary aim is to discuss the challenge of in treatment of refractory arthritis, which needs to be treated with biologics. However, it is not yet known well about their safety on patients who have risks for cancer development.*

CASE DETAILS: *A 25-year-old female patient was admitted to the rheumatology outpatient clinic. The patient had undergone total colectomy and ileoanal anastomosis because of FAP three years ago. On her physical examination, there was arthritis on her left ankle and enthesitis on both Achilles tendons.*

CONCLUSION: *This case report presents a 25-year-old female patient with Ankylosing spondylitis (AS) and FAP whose treatment with biologics is critical due to the risk of cancer development due FAP. Although the potential risk of development of malignancies with TNF-blocking therapy seems to be no more than TNF-naïve patients and general population. But the safety of these drugs on patients with risks for cancer development is still unknown.*

KEYWORDS: *Spondyloarthritis, familial adenomatous polyposis, nonsteroid anti-inflammatory drugs, disease modifying anti-rheumatic drugs, biologics*

INTRODUCTION

Spondyloarthritis (SpA) are a group of different inflammatory diseases which share common clinical and genetic features, such as involvement of the axial skeletons (sacroiliac joints and spine), certain patterns of the peripheral joint involvements, presence of enthesitis and/or dactylitis, characteristic extra-articular manifestations (acute anterior uveitis, psoriasis, inflammatory bowel disease) and association with the presence of HLA-B27 (1).

Based on recommendations developed by ASAS, ACR (American College of Rheumatology) and EULAR (European League Against Rheumatism), the treatment of SpA consists of non-pharmacological and pharmacological methods. Pharmacological treatment methods can be listed as follows; nonsteroidal anti-inflammatory drugs (NSAIDs), conventional disease-modifying anti-rheumatic drugs (cDMARDs) and biologic agents (2).

Familial adenomatous polyposis (FAP) is an autosomal dominant disorder characterized by hundreds of colorectal adenomatous polyps that progress to colorectal cancer (CRC). Nearly fifty percent of patients develop adenomas by the age of 15 and 95% of them by the age of 35. Since patients who had been diagnosed with FAP have risk for cancer development, prophylactic colectomy is recommended to prevent colorectal cancer (3).

CASE REPORT

A 25-year-old female patient with pain in the low back area, the right hip joint, both wrists, the ankles, all the small joints of hands and the feet, and also swelling of the left ankle was admitted to the rheumatology outpatient clinic. The pain in the low back and right hip joint started two years ago without any trauma. The patient claimed that she had night pain and morning stiffness lasting one hour every day for two years. She had undergone total colectomy and ileo-anal anastomosis because of FAP three years ago. In her family, colon cancer was present in her father, her aunt and her grandfather, and one of the members of her distant relatives was diagnosed with ankylosing spondylitis.

On her physical examination, she had pain while pressing on her right wrist, both hands and the feet metacarpophalangeal and the metatarsophalangeal joints and the left ankle. There was arthritis on her left ankle and enthesitis on both Achilles tendons.

HLA typing was positive for B27. Laboratory analysis revealed C-reactive protein, 7.8 mg/dl (normal <0.5 mg/dl), and erythrocyte sedimentation rate of 83 mm/h as high. Hemoglobin was 10.5 g/dl, white blood cell was

12.36, and platelet count was 481.000/mm³. The blood chemistries were all within normal limits.

The serological tests for HIV and hepatitis B and C were negative. Also, the levels of carcinogenic (CA) (CA-72.4: 1.37 U/mL, CA-125: 12.2 U/mL, CA-15-3: 5.4 U/mL, CA-19-9: 10.0 U/mL) and carcinoembryonic antigens (0.0 ng/mL) were normal. Chest X-ray showed no specific abnormalities, but bilateral grade 2 sacroiliitis was detected on her pelvic radiograms. However, typical cervical, thoracic and lumbar spine syndesmophytes were not identified. Magnetic resonance imaging (MRI) revealed active bilateral sacroiliitis. On her sacroiliac MRI, there was subchondral edema. Also, subchondral erosions and localized fat depositions were present in the subchondral marrow spaces.

Her thoracic, renal, abdominal tomographic examinations and thyroidal ultrasound imaging did not reveal any abnormality. Her mandibular X-ray graph and her upper gastrointestinal imaging with endoscopy were normal as well. On magnetic resonance imaging of her left ankle (Image 1-3), an intense medullar edema on the dorsal subcutaneous tissue was detected at the metatarsal level.

She was diagnosed with ankylosing spondylitis due to inflammatory back pain, sacroiliitis, peripheral arthritis, enthesitis, HLA B27 positivity and radiological imaging based on the Assessment of SpondyloArthritis International Society (ASAS) criteria (4).

Lumbar Modified Schober was measured as 5.5 cm. The patient's Bath AS Disease Activity Index (BASDAI), Bath AS Metrology Index (BASMI), Bath AS Functional Index (BASFI), and Bath AS Radiologic Index (BASRI) were 6, 9, 4.05, and 2 respectively.

Medical treatment was started for ankylosing spondylitis with indomethacin (25 mg 2x1), Sulfasalazine (500 mg 2x2) and prednisolone (5mg 1x1) per oral (P.O). Because of no improvement in the patient's disease activity, sulfasalazine was stopped and methotrexate (MTX) was started with 15 mg per week subcutaneously after six months. Good results in swelling of joints, lowering levels of ESR and CRP were observed following administration of

MTX. After a year without any pain and swelling, she started having pain on her left shoulder while moving the left shoulder, and swelling and erythema were detected on her left ankle. We wanted to treat the patient with anti-TNF, but we could not because the patient had some risks for cancer development due to presence of her FAP. Anti-TNFs are effective in inducing clinical improvement in spondyloarthritis, but authorities do not suggest for patients in risk of developing cancer in case of using Anti-TNF (5).

DISCUSSION

This case report presents a 25-year-old female patient with AS and FAP whose treatment with biologics was critical because of the risk of cancer development due to presence of FAP. Based on treatment recommendations by ASAS/EULAR and ACR, we started treatment with NSAIDs as the first line treatment in optimal doses, but there was no clinical improvement in her pain and arthritis. As sulfasalazine has been used to treat patients with SpA for more than 20 years, it could be considered for those with prominent peripheral arthritis. We added 2000 mg of sulfasalazine P.O, but no improvement in disease activity was observed in 6 months of administration. Although the beneficial effect of methotrexate was not certain due to limited trials of this drug, we continued with methotrexate 15 mg subcutaneously. Unfortunately, no improvement was shown in her disease activity after 3 months of regular administration of methotrexate.

Anti-TNF is an effective treatment for patients with SpA who are resistant to DMARDs. Several studies have proven the efficacy of anti-TNF drugs in reducing inflammation status and improving the quality of life of AS patients with no specific superiority in terms of efficacy of one over the others. Interestingly, all available anti-TNFs are effective in inducing a significant clinical improvement in a two-week time frame (2). TNF plays a crucial role in defending against microbial agents. Therefore, when its effects are blocked, patients may be at higher risk of infections especially in the upper and lower airways and urinary tract. Apart from the risk of infections, another source of concern is related to

the possible occurrence of malignancies. Patients with autoimmune diseases have an increased risk of developing lymphomas when compared with the healthy population (6). Caution should be taken when considering TNF-blocking therapy for patients with a history of malignancy or maintenance of treatment for patients who have a potential risk in developing malignancy (7).

Our case has FAP disease, if she were not recognized and treated, it was nearly 100% certain that the polyps would develop into a colon or rectal cancer by the age 40. Other than colorectal cancer, multiple malignancies associated with FAP are also recognized. Extracolonic malignancies also include thyroid cancer (2–3%), pancreatic mucinous adenocarcinomas (1%), hepatoblastoma (1%) and brain tumors (ie, medulloblastoma; <1%). Therefore, patients with FAP are more prone to cancer development (8).

In a recent published literature assessing the cancer risk following initiation of TNF inhibitor therapy in a very large population of patients with SpA, the incidence regarding the individual SpA disease subtypes was resulted as 0.9 which was similar in both AS and psoriatic arthritis. The authors concluded that treatment with TNF inhibitors was not associated with increased risks of cancer, neither overall nor for the six most common cancer types in patients with SpA (9). Likewise, in randomized controlled trials, increase in the incidence of solid malignancies with anti-TNF therapy has not been reported in the long-term observational studies, with the exception of an increased risk of non-melanoma skin cancers (10).

In conclusion, the fact that the TNF alpha inhibitors have recently been introduced and long-term side effects are unknown. Although the potential risk in development of malignancies with TNF-blocking therapy seems to be no more than TNF-naïve patients and general population, the safety of these drugs on patients with risks of cancer development is still unknown. Therefore, further studies are obviously needed to gather knowledge about the safety of biologic agents to formulate an algorithm for the pharmacological treatment of patients with history of previous malignancy or having a risk for malignancy.

REFERENCES

1. Braun J, Sieper J (2007) Ankylosing spondylitis. *Lancet* 369:1379–90.
2. Braun J, van den Berg R, Baraliakos X et al (2011) 2010 update of the ASAS/EULAR recommendations for the management of ankylosing spondylitis. *Ann Rheum Dis.* 70:896-904
3. Hirota WK, Zuckerman MJ, Adler DG, et al (2006) ASGE guideline: the role of endoscopy in the surveillance of premalignant conditions of the upper GI tract. *Gastrointest Endosc.* 63:570–80.
4. Rudwaleit M, van der Heijde D, Landewe R, Akkoc N, Brandt J, Chou CT, et al (2011) The Assessment of SpondyloArthritis International Society classification criteria for peripheral spondyloarthritis and for spondyloarthritis in general. *Ann Rheum Dis.* 70:25–31.
5. Sieper J, Rudwaleit M, Baraliakos X, Brandt J, Braun J, Burgos-Vargas R, et al (2009) The Assessment of SpondyloArthritis international Society (ASAS) handbook: A guide to assess spondyloarthritis. *Ann Rheum Dis.* 68 (Suppl. II): ii1-ii44.
6. Asking J, Fored CM, Brandt L, et al (2005) Risks of solid cancers in patients with rheumatoid arthritis and after treatment with tumour necrosis factor antagonists. *Ann Rheum Dis.* 64:1421-6
7. Maxwell LJ, Zochling J, Boonen A, Singh JA, Veras MMS, Tanjong Ghogomu E, et al (2015) TNF-alpha inhibitors for ankylosing spondylitis. *Cochrane Database Syst Rev.* 4:CD005468. doi: 10.1002/14651858.CD005468.pub2.
8. Groen EJ, Roos A, Muntinghe FL, et al (2008) Extra-intestinal manifestations of familial adenomatous polyposis. *Ann Surg Oncol.* 15:2439–2450.
9. Vasen HF, Möslein G, Alonso A, et al (2008) Guidelines for the clinical management of familial adenomatous polyposis (FAP) *Gut.* 57:704–713.
10. De Angelis F, Di Rocco A, Minotti C, et al (2012) Atypical presentation of anaplastic large T-cell lymphoma mimicking an articular relapse of rheumatoid arthritis in a patient treated with etanercept. A case report and literature review. *Leuk Res.* 36:e199-201