



## Large Pelvic Abscess in a Young Female Presenting as Urinary Retention. A Case Report

Priti Agrawal<sup>1\*</sup>, Rishi Agrawal<sup>2</sup>, Pankaj Motghhare<sup>3</sup>, Anand Bansal<sup>4</sup>  
and Jyotirmay Chandrakar<sup>5</sup>

<sup>1</sup>Department of Obstetrics, Gynecology and Infertility, Aarogya Hospital and Test Tube Baby Center, Raipur, Chhattisgarh, India.

<sup>2</sup>Department of General and Laparoscopic Surgery, Aarogya Hospital and Test Tube Baby Center, Raipur, Chhattisgarh, India.

<sup>3</sup>Department of Medicine and Intensive Care, Aarogya Hospital and Test Tube Baby Center, Raipur, Chhattisgarh India.

<sup>4</sup>Department Radiology, Shriram Imaging and Diagnostic Centre, Raipur, Chhattisgarh, India.

<sup>5</sup>Department of Anesthesia, Aarogya Hospital and Test Tube Baby Center, Raipur, Chhattisgarh, India.

### Authors' contributions

This work was carried out in collaboration among all authors. Authors PA and RA operated the case and did preoperative evaluation and postoperative care. Author PM gave intensive and medical care to the patient. Author AB did radiological imaging studies. The intraoperative and postoperative anesthesia was managed by author JC. The manuscript was prepared by author PA. All authors read and approved the final manuscript.

### Article Information

#### Editor(s):

(1) Dr. Ramesh Gurunathan, Sunway Medical Center, Malaysia.

#### Reviewers:

(1) Arda Isik, Istanbul Medeniyet University, Turkey.

(2) Umoke, Ifeanyi Charles, Kubwa General Hospital, Nigeria.

(3) Randy McCool, Northwest Community Hospital, USA.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/65295>

Case Study

Received 24 November 2020

Accepted 29 January 2021

Published 11 February 2021

### ABSTRACT

**Introduction:** The pelvic abscess is a circumscribed collection of infected exudates. In young women, a pelvic abscess occurs as one of the complications of pelvic inflammatory disease. The incidence of pelvic abscess is less than 1 % in a patient undergoing obstetric and gynaecological surgeries. Here we report a case of large pelvic abscess in a young female patient who presented with severe backache, urinary retention and abdominal pain and remained afebrile throughout the course of her illness.

\*Corresponding author: E-mail: [drpritiagrawal15@gmail.com](mailto:drpritiagrawal15@gmail.com);

**Case Presentation:** Our patient young female 30 years in age, presented with complaints of inability to pass urine for 4 hours with severe backache and abdominal pain. She had undergone tubectomy operation 4 years back. She had no history of vaginal discharge, fever, loss of appetite, weight loss or severe abdominal pain. Ultrasonography revealed large pelvic abscess measuring 13.18 x 13.84 x 13.91cm, volume-1328cc with homogenous internal echoes and thick wall. Laparotomy was done, dense intestinal and omental adhesions with the abscess wall removed. About 1.5 litres of pus drained from the abscess cavity. Pelvic ultrasound is the method of choice to evaluate a pelvic mass as it differentiates between fluid filled lesion and solid lesion, is inexpensive. Laparotomy with drainage of the abscess and lavage of the cavity is the mainstay of the treatment.

**Conclusion:** Our patient had non-specific symptoms. She remained afebrile throughout the course of illness and recovery. Surgical drainage and adhesiolysis through laparotomy gave her complete recovery.

*Keywords: Pelvic abscess; laparotomy; percutaneous drainage; sepsis.*

## 1. INTRODUCTION

The pelvic abscess is a circumscribed collection of infected exudates. In young women, a pelvic abscess occurs as one of the complications of pelvic inflammatory disease. It starts as an ascending infection from the vagina, cervix and spreads to the uterus, fallopian tube and peritoneum. Pelvic abscess can also occur after operative procedure like hysterectomy, laparotomies, caesarean sections and induced abortions. The incidence of pelvic abscess is less than 1% in a patient undergoing obstetric and gynaecological surgeries [1]. The clinical presentation of pelvic abscess is highly variable. Patients may present with high grade fever, general malaise, nausea, vomiting, tachycardia, lower abdominal pain, vaginal discharge, vaginal bleeding, retention of urine and change in bowel habit. Here we report a case of large pelvic abscess in a young female patient who presented with severe backache, urinary retention and abdominal pain and remained afebrile throughout the course of her illness.

## 2. CASE PRESENTATION

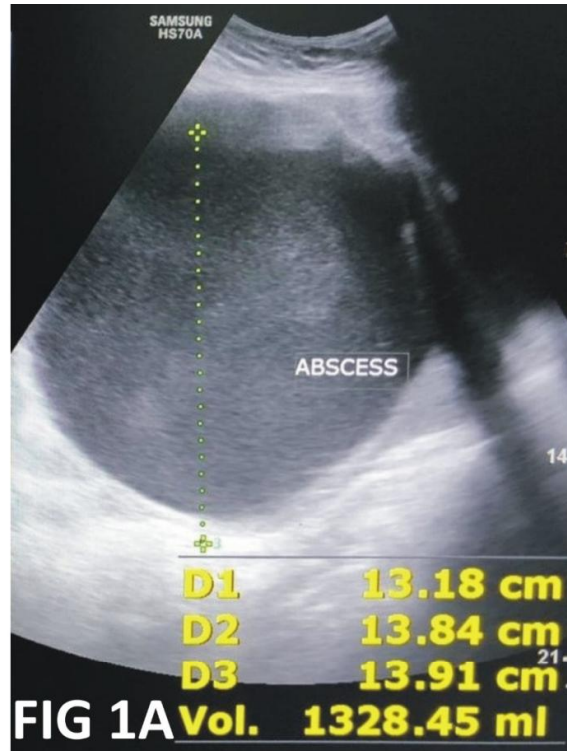
Our patient young female 30 years in age, weight-55 kg, height -154cms, BMI-23.19 presented with complaints of inability to pass urine for 4 hours with severe backache and abdominal pain. She had two full term vaginal deliveries and her children were 9 and 5 years old. She had undergone tubectomy operation 4 years back. Her menstrual cycles were regular with average bleeding and no associated dysmenorrhea. She had no history of vaginal discharge, fever, loss of appetite, weight loss or severe abdominal pain. She stated that for last 4 months she had burning micturition and difficulty in passing urine with associated backache

radiating to right thigh for which she had taken antibiotics. She was having single sex partner (her husband), no history of sexually transmitted disease, intrauterine device insertion, diabetes mellitus, endometriosis, chronic abdominal pain or compromised immunity like in HIV/AIDS.

On examination she was afebrile, pulse - 100/minute, BP -120/80mm of Hg with satisfactory general condition. On abdominal examination large lump about 20x20cms occupying whole lower abdomen was seen. The overlying skin was normal and on palpation the lump had vague tenderness, well defined margins with fluctuation simulating large ovarian cyst. On per speculum examination, vagina and cervix were normal. On vaginal examination uterus could not be felt separately from the lump. On per rectal examination there was no bulging or tenderness of the anterior rectal wall. Cervical movements were not tender. Immediate catheterisation was done and 500ml of clear urine was drained out. Routine blood counts, ESR, C- reactive protein, CA-125 and beta HCG was negative. X-ray chest, ECG, Echocardiogram all were normal. High vaginal swab and urine culture and sensitivity were sterile. Ultrasonography revealed large pelvic abscess measuring 13.18 x 13.84 x 13.91cm, volume-1328cc with homogenous internal echoes. (Fig.1A) and thick wall, 1.49 cm (Fig.1B). Uterus was normal in size and lying posterior to the abscess (Fig. 2A). The margins of the collection extended deep into the right broad ligament pushing the bladder anteriorly and uterus posteriorly (Fig. 2B). Bilateral ovaries were not visualised separately and remaining intrabdominal organs were normal. USG guided FNAC from the lump revealed pus cells. Laparotomy was done by midline vertical incision, dense intestinal and omental adhesions

with the abscess wall removed. About 1.5 litres of pus drained from the abscess cavity and sent for pus culture and sensitivity. After drainage uterus and bilateral ovaries visualised and normal in shape, size and structure (Fig. 3). The abscess lining was superiorly showing right tube identified by fimbrial end (Fig. 4A). and extending deeply into the broad ligament (Fig. 4B) Abscess wall removed and sent for

histopathology. Drain kept insitu, removed on 4<sup>th</sup> postoperative day and recovery uneventful. TB-gamma interferon was negative. Pus cells were seen on smear but culture and sensitivity were sterile for both aerobic and anaerobic organisms. Patient remained afebrile throughout the course of hospital stay. Histopathology revealed chronic inflammatory lining of the abscess wall.



**FIG 1A**



**Fig. 1A. Showing Large abscess and Fig. 2B. Thick wall of the abscess**

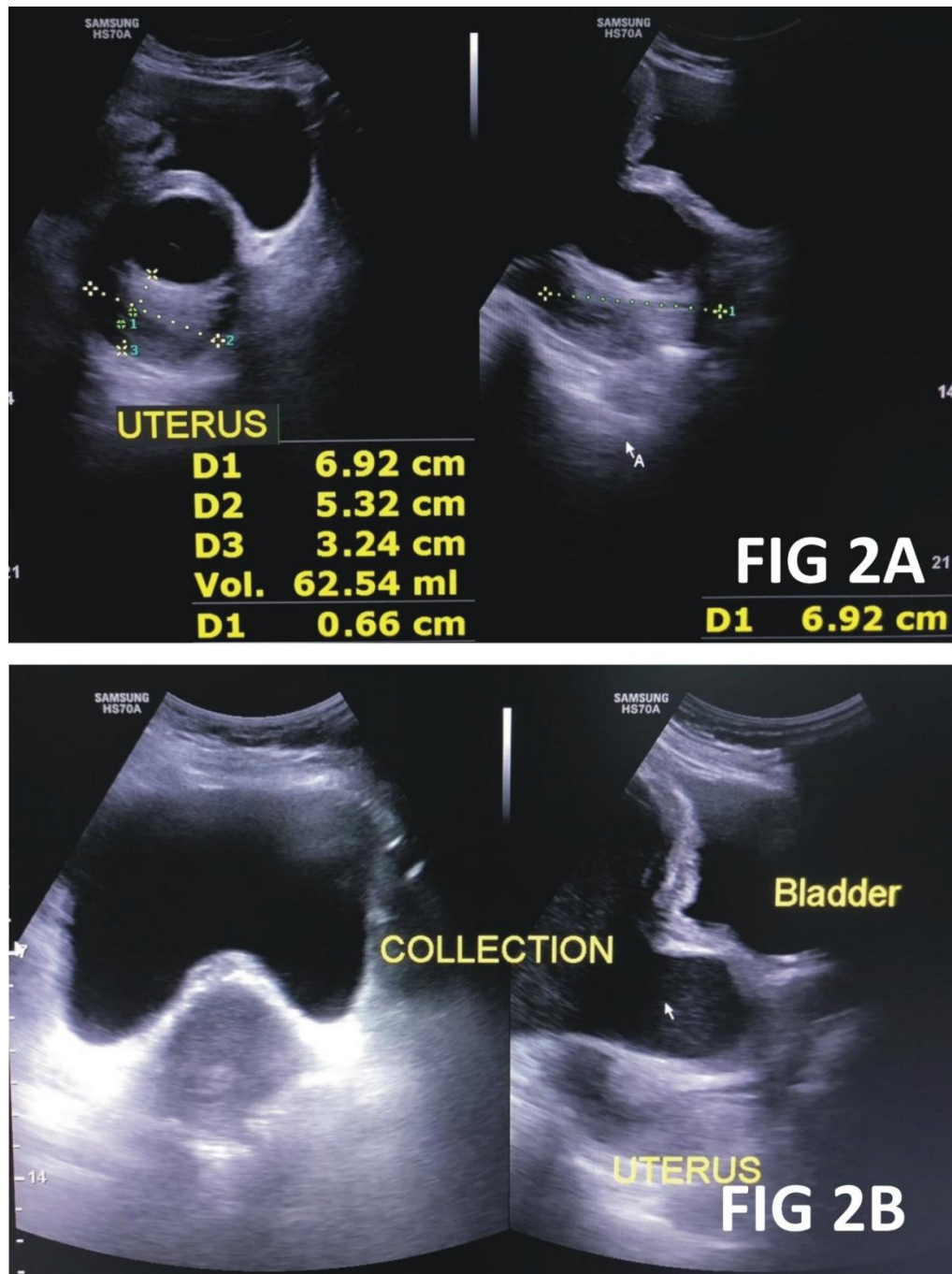


Fig. 2A. Uterus pushed posteriorly by the abscess and Fig. 2B. Extension of the abscess deep into broad ligament

### 3. DISCUSSION

Pelvic abscess is formed by liquefaction necrosis. If host defence mechanism is weak, high virulence of bacterial inoculum or inadequate or insufficient antibiotic coverage is

there, then these abscesses develop. The necrotic tissues are built up around the infective exudate and form a thick fibrous wall. In such localisation, the patients may remain afebrile and this happened in our patient. In 1983 a study by Landers and Sweet [2] demonstrated that 35 % of

women with abscess remain afebrile and 23% had normal leucocyte count. Patients can also have nausea, vomiting, vaginal bleeding, right flank/hip pain due to massive size of the abscess [3,4,5,6]. Similar symptoms may occur in ectopic pregnancy, renal colic, appendicitis, pelvic inflammatory disease and large ovarian cysts.

Pelvic ultrasound is the method of choice to evaluate a pelvic mass as it different rates between fluid filled lesion and solid lesion, is inexpensive, without radiation exposure and non-invasive [7]. It can also help in FNAC and drainage of the abscess [8].

Computed tomography (CT) and magnetic resonance imaging (MRI) are especially useful in postoperative patients. CT scan with oral or intravenous contrast enhances the diagnostic accuracy. The pelvic abscess exhibits as a hypodense collection with peripheral round or oval intensification CT scan has slightly better

sensitivity and specificity than ultrasound [9,10,11,12].

Laparotomy with drainage of the abscess and lavage of the cavity is the mainstay of the treatment. Ultrasound and CT guided percutaneous drainage of both deep organ space and superficial abscesses has good success rate [13]. These modalities do not require general anaesthesia, less invasive and abscess drainage is not complicated by compartmentalization or fistulation with shorter hospital stay. But we decided for open surgical drainage because of massive size of abscess. During surgery we could also do adhesiolysis of bowel, bladder adhesions and removal of thick abscess wall which is not possible in percutaneous drainage by various modalities and can lead to long term morbidity and recurrence of abscess. Endoscopic ultrasound guided transrectal drainage has also been advocated [14].

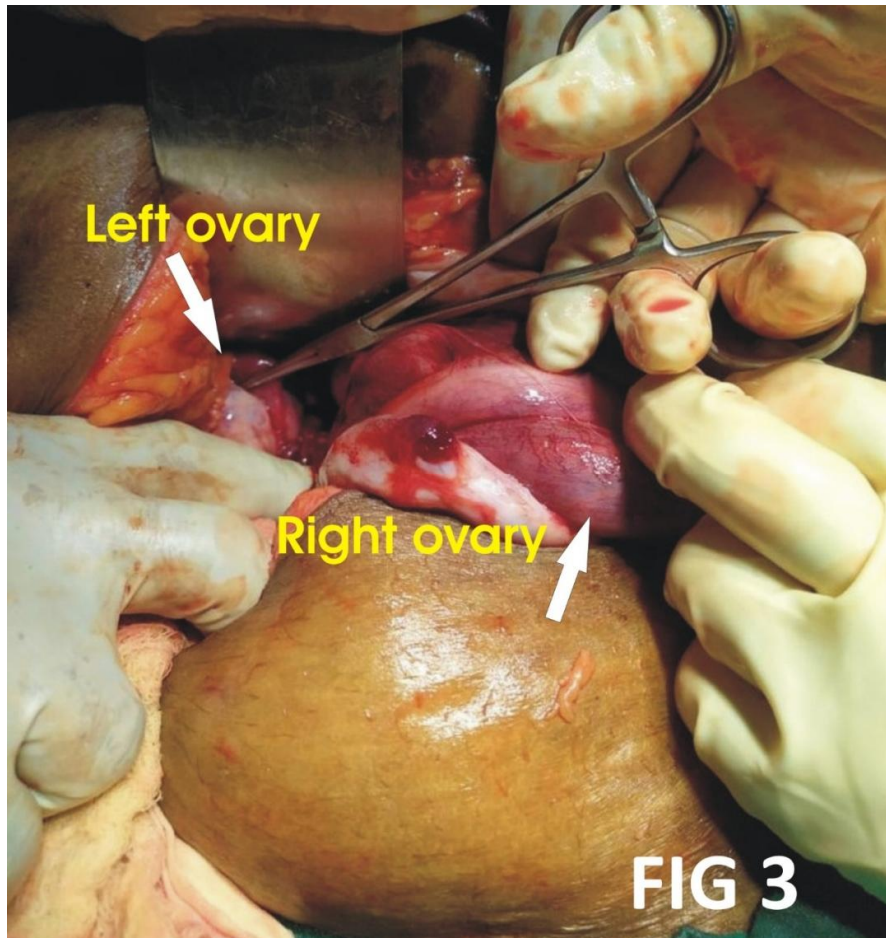
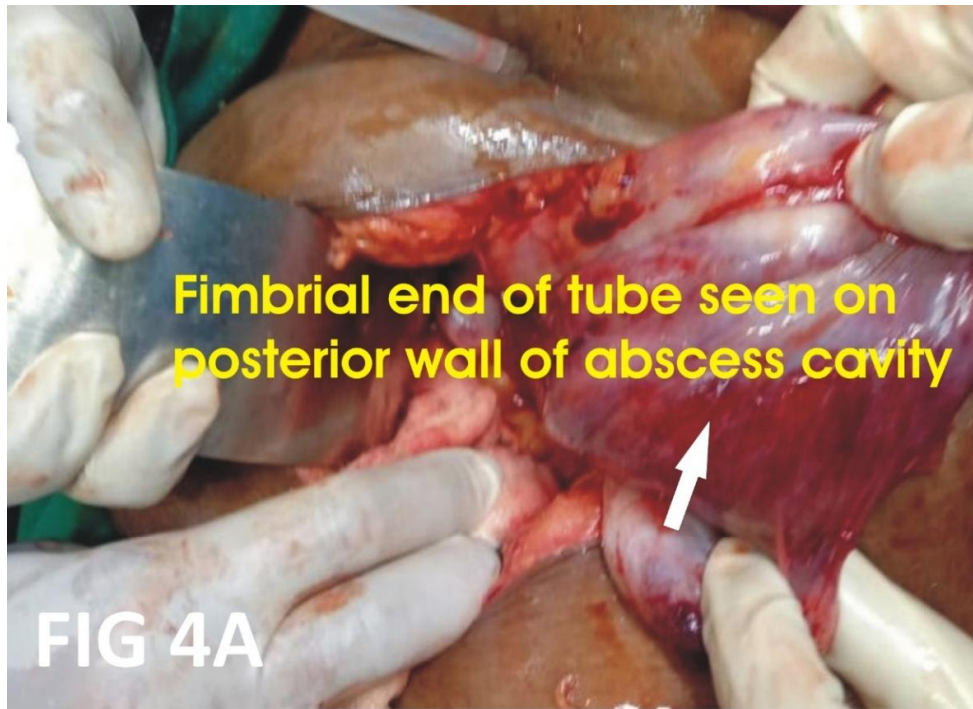


Fig. 3. After drainage of abscess bilateral ovaries and uterus visualised



**Fig. 4A. Superior and posterior abscess wall and Fig. 4B. Abscess wall being removed**

#### 4. CONCLUSION

Our patient had non-specific symptoms and when abscess became large in size and produced compression effects and urinary retention then patient reached hospital. She remained afebrile throughout the course of illness and recovery. Surgical drainage and adhesiolysis through laparotomy gave her complete recovery.

#### CONSENT

Written informed consent was obtained from the patient for publication of this study and accompanying images.

#### ETHICAL APPROVAL

It is not applicable.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

#### REFERENCES

1. Mahdi H, Goodrich S, Lockhart D, De Bernardo R, Moslemi-Kebria M, Predictors of surgical site infection in women undergoing hysterectomy for benign gynecologic disease: A multicenter analysis using the national surgical quality improvement program data, J. Minim. Invasive Gynecol. U.S. National Library of Medicine. 2014;21(5):901–909. Available: <http://dx.doi.org/10.1016/j.jmig.2014.04.003> Epub 2014 Apr 24. PMID: 24768957.
2. Landers DV, Sweet RL. Tubo-ovarian abscess: Contemporary approach to management. Rev Infect Dis. 1983;5(5):876-84. [PubMed: 6635426]
3. Elkbuli A, Kinslow K, Diaz B, Hai S, McKenney M, Boneva D, Giant pelvic abscess with sepsis: Case report and review of current literature International Journal of Surgery Case Reports. 2019;(64):85–88.
4. Bugg CW, Taira T, Zourova M. Pelvic inflammatory disease: diagnosis and treatment in the emergency department [digest]. Emerg Med Pract. 2016;22:18,(12 Suppl Points and Pearls),S1-S2. [PubMed: 28745849]
5. Chappell CA, Wiesenfeld HC. Pathogenesis, diagnosis, and management of severe pelvic inflammatory disease and tuboovarian abscess. Clin Obstet Gynecol. 2012;55(4):893-903. [PubMed: 23090458]
6. Granberg S, Gjelland K, Ekerhovd E. The management of pelvic abscess. Best Pract Res Clin Obstet Gynaecol. 2009;23(5):667-78. [PubMed: 19230781]
7. Sayasneh A, Kaijser J, Preisler J, Smith AA, Raslan F, Johnson S, Husicka R, Ferrara L, Stalder C, Ghaem Maghami S, Timmerman D, Bourne T. Accuracy of ultrasonography performed by examiners with varied training and experience in predicting specific pathology of adnexal masses. Ultrasound Obstet Gynecol. 2015;45(5):605-12. [PubMed: 25270506]
8. Akıncı D, Ergun O, Topel Ç, Çiftçi T, Akhan O. Pelvic abscess drainage: outcome with factors affecting the clinical success. Diagn Interv Radiol. 2018;24(3):146-152. [PMC free article: PMC5951203] [PubMed:29770767]
9. Hiller N, Sella T, Lev-Sagi A, Fields S, Lieberman S. Computed tomographic features of tuboovarian abscess. J Reprod Med. 2005;50(3):203-8. [PubMed: 15841934]
10. Koehler PR, Moss AA. Diagnosis of intra-abdominal and pelvic abscesses by computerized tomography. JAMA. 1980;04:244(1),49-52. [PubMed: 7382054]
11. Granberg S, Gjelland K, Ekerhovd E. The management of pelvic abscess, Best Pract. Res. Clin. Obstet. Gynaecol. 2009;23(5):667–678.
12. Robert B, Chivot C, Fuks D, Gondry-Jouet C, Regimbeau JM, Yzet T. Percutaneous, computed tomography-guided drainage of deep pelvic abscesses via a transgluteal approach: A report on 30 cases and a review of the literature, Abdom. Imaging. 2013;38(2):285–289.
13. Marianne E, Cinat MD, Samuel E, Wilson MD, Adnan , Din MD. Determinants for successful percutaneous image-guided drainage of intra-abdominal abscess, Arch Surg. 2002;137(7):845-9. DOI: 10.1001/archsurg.137.7.845
14. Hadithi M, Marco J, Bruno MJ. Endoscopic ultrasound-guided drainage of pelvic

abscess: A case series of 8 patients World  
J Gastrointest Endosc. 2014;16:6(8),373-8.  
DOI: 10.4253/wjge.v6.i8.373

PMID: 25132921,  
PMCID: PMC4133417,  
DOI: 10.4253/wjge.v6.i8.373

---

© 2021 Agrawal et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*  
*The peer review history for this paper can be accessed here:*  
*<http://www.sdiarticle4.com/review-history/65295>*