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S&A PHARMA NEWSLETTER

EDITORIAL

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The role of a drug regulatory authority is not only to authorize drugs for marketing and manufacturing, but also to regulate its quality, safety, affordability and availability to the patients. Regulatory authorities with their comprehensive updated guidelines keep regulating the pharmaceutical products globally; however, extra efforts and periodic reviews of guidelines is expected from the health organizations and regional governments in the public interest.

We are pleased to present this Vol. III Issue V of S&A – Pharma Newsletter. Through this newsletter, we aim to share recent information allied to regulatory reforms and updates from pharmaceutical sector in India as well as from foreign jurisdictions, based on information collated through research and appraisal of applicable statutory provisions.

In the present issue, we start with a note on the DCGI notification announcing a new procedure to be followed by drug manufacturers for clearance of FDCs. Going forward, this edition covers the safety communication of medical devices issued by CDSCO, which seeks to Alert Providers and Patients to Check for Premature Battery Depletion in Certain model of Medtronic Pacemakers. Further on, this edition discusses the Interim Order of High Court restraining Natco Pharma from manufacturing fresh batch of anti-cancer drugs, which seem to be infringing a patent of Novartis. The edition then discusses the Memorandum of Understanding signed by Department of Biotechnology and the Department of Atomic Energy supporting joint collaborative research programmes in the area of Cancer followed by a write-up on the central government notice that classifies the twelve (12) new notified medical devices under risk based classification of Medical Device Rule, 2017.

From the international arena, we talk about WHO's new guideline on "risk reduction of cognitive decline and dementia" which provides evidence-based recommendations on lifestyle behaviors to delay or prevent cognitive decline and dementia. The edition then discusses the USFDA approval of "*Synovasure Lateral Flow Test Kit*" a first diagnostic test to aid in detecting prosthetic joint infections followed by a note on the USFDA's warning to healthcare professionals against the use of unauthorized devices for diabetes management.

We wrap this edition with separate write-ups on two of USFDA's approvals - 1) Fragmin (dalteparin sodium) injection, to reduce the recurrence of symptomatic venous thromboembolism (VTE) in pediatric patients one month of age and older, and 2) Piqray (alpelisib) tablets, to be used in combination with the FDA-approved endocrine therapy fulvestrant, to treat postmenopausal women, and men with PIK3CA-mutated, advanced or metastatic breast cancer.

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Trust you enjoy reading this issue as well. Please feel free to send your valuable inputs / comments at newsletter@singhassociates.in

Thank you.

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Contents

1. DCGI notifies new procedure to be followed for regulatory clearance of FDCs 04
2. After USFDA India too warns about premature battery depletion in certain pacemaker models 06
3. Delhi High Court reserved patentee rights by restraining a rival pharma company from manufacturing anti-cancer Drugs 07
4. DBT and DAE signed MoU for Joint Collaboration on Cancer Research 09
5. Central Government classifies 12 new notified medical devices under MDR 2017 10
6. WHO has come up with new official guidelines to help people reduce the risk of dementia 12
7. FDA permits the first diagnostic test to aid in detecting prosthetic joint infections 13
8. US FDA warns health care professionals against the use of unauthorized devices for diabetes management 14
9. FDA approves first anticoagulant 'Fragmin' to treat potentially life-threatening blood clots in pediatric patients 15
10 FDA approves first PI3K inhibitor for breast cancer 16

DCGI notifies new procedure to be followed for regulatory clearance of FDCs

On May 22, 2019 the Drug Controller General of India (DCGI) has directed drug manufacturers and concerned stakeholders to follow a new procedure for clearance of subsequent applications of Fixed Dose Combinations (FDCs) falling under category 'd' as per Prof. Kokate Committee report for FDCs which require generation of data[1].

Need for the procedure

In the year 2013, CDSCO issued an official letter requesting all the State/ UT Drugs Controllers to ask the concerned manufacturers in their State to prove the safety and efficacy of FDCs within 18 months which were permitted by State Licensing Authorities without due approval from the office of DCG(I).

Thereafter, examination of such applications in consultation with Prof. Kokate Committee constituted by Ministry of Health and Family Welfare, concerned manufacturers were earlier asked to conduct Phase IV study in post-market scenario for generation of data to decide further on such FDCs falling under category 'd' as per the report of the Committee.

Subsequently, this Directorate received representations from various stakeholders requesting for waiver of Phase IV clinical trial. The matter was examined by this Directorate in consultation with Prof. Kokate Committee, where the Committee recommended for categorization of FDCs into two sub-groups:-

I. FDCs which require Phase-IV trial (Post-Marketing Trial/ Bioequivalence Study) as per Drugs & Cosmetics Rules, 1945.
II. FDCs for which Active Post Marketing Surveillance shall be conducted under intimation to DCG (I) and report shall be submitted for further evaluation.

Further, the Directorate also received representations from subsequent applicants for obtaining NOC from CDSCO for manufacturing and marketing w.r.t. FDCs falling under category 'd' to have a level playing field.

The required procedure

The DCGI along with the health ministry has decided to follow the procedure for clearance of subsequent applications of FDCs falling under category 'd', which requires manufacturer and concerned stakeholders to submit:

1. Documents required in case of manufacturers already holding licenses from State Licensing Authority (SLA) before 01.10.2012 for the proposed FDCs shall at least contain :-

a) Form CT 21(duly filled, signed and stamped)
b) Fees as specified in sixth schedule of New Drugs and Clinical Trials Rules 2019 through Bharatkosh.
c) Name and composition of the FDC
d) Product Permission issued by SLA
e) Copy of manufacturing license in Form 25/28
f) Sl. no. and name of FDC as per the "Annexure A" and
g) Phase IV trial protocol/commitment for conducting Active Post Marketing Surveillance study/ Bio-equivalence study protocol, as the case may be.

1 https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download_file_division.jsp?num_id=NDQ2MA==

2. Documents required in case of new manufacturers for the proposed FDCs shall at least contain:-

a) Form CT 21(duly filled, signed and stamped)
b) Fees as specified in sixth schedule of New Drugs and Clinical Trials Rules 2019 through Bharatkosh.
c) Name and composition of the FDC
d) Product Permission issued by SLA in Form 29
e) Copy of manufacturing license in Form 25/28
f) Sl. no. and name of FDC as per the "Annexure A"
g) Stability studies data (06 months accelerated)
h) Test Specifications of the FDC alongwith Method of Analysis
i) Phase IV trial protocol/commitment for conducting Active Post Marketing Surveillance study/ Bio-equivalence study protocol, as the case may be.

3. All the manufacturers who are already holding licenses from State Licensing Authorities for such FDCs before 01.10.2012 and did not apply to DCG (I) are required to submit their applications to this Directorate at the earliest but not later than 6 months, failing which their applications will not be considered and their licenses will be considered as without legal validity.

Conclusion

The notified procedure would be an effective step forward taken by the Directorate to streamline and speed-up the clearance process, and would help the manufactures and concerned stakeholders during subsequent applications for obtaining NOC for manufacturing and marketing of FDCs.

After USFDA India too warns about premature battery depletion in certain pacemaker models

On May 18, 2019 Central Drugs Standard Control Organization (CDSCO) has issued safety Communication to Alert Providers and Patients to Check for Premature Battery Depletion in Certain Medtronic Pacemakers models, this alert comes, just after US Food and Drug Administration (USFDA) issued its safety communication[2]. The safety communication warns health care providers, patients & other stakeholders to take necessary precautions & actions while using these devices.

Earlier the USFDA has received three reports of a crack in the device's capacitor of medical devices where a Medtronic implantable pacemaker or CRT-P battery had fully drained because of a crack, without any warning to the patient or health care provider. The USFDA was concerned about, what If the battery is completely drained, and the device will no longer deliver a pacing therapy. It will create a risk or adverse outcome to the patients who are fully dependent on pacing therapy.

On another side, the Medtronic reports in all three medical devices cases revealed that 'the health care providers were unable to communicate with the device due to battery depletion, resulting in loss of pacemaker function.' Medtronic also reported that these cases were occurred within a year of the pacemaker or CRT-P implantation to the patients. The affected Medtronic implantable pacemaker and CRT-P device includes five (5) models: Azure; Astra; Percepta; Serena; and Solara models.

About Medtronic's Devices:

Medtronic's implantable pacemakers or cardiac resynchronization therapy pacemakers (CRT-Ps) are devices that provide pacing for slow heart rhythms and heart failure. Pacemakers and CRT-Ps are both implanted under the skin in the upper chest area with connecting insulated wires called leads that go into the heart. A patient may need a pacemaker or CRT-P if their heartbeat is too slow (bradycardia) or needs coordination to treat heart failure.

Implanted pacemakers and CRT-Ps have electronics and are powered by lithium-ion batteries. One of the key electronic components is a capacitor, which stores electrical energy. Patients can use remote monitoring systems, such as Medtronic's MyCareLink Monitor, to help their health care providers monitor battery status and general functioning of their implanted pacemaker or CRT-P. Health care providers receive CareAlert notifications through manual transmissions from the patient or by wirelessly connecting to the patient's implanted pacemaker or CRT-P when the patient's device has CareAlerts programmed "ON." The patient and health care provider receive an Elective Replacement Indicator (ERI) CareAlert notification when the battery level drops below a certain limit.

2 https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download_file_division.jsp?num_id=NDQzNw==

Delhi High Court reserved patentee rights by restraining a rival pharma company from manufacturing anti-cancer Drugs

On May 02, 2019 the Delhi High Court restrained Hyderabad-based Natco Pharma from manufacturing fresh stock of drugs comprising of a compound named 'Ceritinib' meant for the treatment of non-small cell lung cancer, while allowing the company to sell the existing stock keeping in mind the interest of the patient community[3]. The interim order reserved the right of patentee (Novartis AG) or Plaintiff under Section 48 of the Patents Act.

Background Matter

The Plaintiff Novartis AG had filed patent for 'Ceritinib' as a Patent Convention Treaty (PCT) application claiming priority since 2007, and was granted on 28th September, 2015. Later it came to the notice of Novartis that one Indian pharmaceutical company 'Natco Pharma' has launched 'Certinib Capsules (NOXALK)', which was an infringement of its patent. Thereafter, the plaintiff filed the patent suit seeking permanent injunction, damages, rendition of accounts and delivery up in respect of its granted patent (Indian Patent No. 276026) against Natco.

The defendant Natco Pharma Ltd. had filed a post grant opposition within the statutory period under Section 25 (2) of the Patents Act, 1970. The said opposition was initially referred for the consideration of the Opposition Board, which gave a report in favour of the Plaintiff. Natco Pharma thereafter, filed additional material and now the hearing in the post grant opposition itself stands concluded, and the order was reserved on 10th April, 2019.

Meanwhile, Natco had launched the product while the post grant opposition is yet to be decided.

Then the Plaintiff prayed that an interim injunction deserves to be granted in the present case, as the Defendant had chosen to launch the product despite the patent having been granted, the opposition having been filed and the decision in the same being pending.

The Court heard both sides on the grant of ad-interim relief said that 'It was the admitted position that the post grant opposition is now pending decision with the Patent Office and the question as to whether the patent is to be maintained or not will be decided therein. Thus, in so far as the validity of the patent itself is concerned, this court would not like to make any observation at this stage, so as to ensure that the post grant opposition is decided without being affected by any observation which may be made by this court'.

Thus, during the period when the post-grant opposition decision was yet to come, the Defendant had chosen to commercially launch its product. While the Supreme Court in Aloys Wobben (supra) held that the rights would be crystallized once the post grant opposition is decided, launch of an allegedly infringing product under Section 48[4] of the Patents Act grants rights in favour of a patentee, which are not affected during the pendency of a post-grant opposition.
Natco Pharma, in all its conscious mind have launched the product knowing the fact that the post grant opposition was pending decision in the patent office. Therefore, the Court restrained Natco from carrying out any fresh manufacturing of 'Ceritinib' formulation till the next order of the Court.

3 http://delhihighcourt.nic.in/dhcqrydisp_o.asp?pn=110752&yr=2019

4 "Section 48. Rights of patentees – Subject to other provisions contained in this Act and the conditions specified in section 47, a patent granted under this Act shall confer upon the patentee- (a) where the subject matter of the patent is a product, the exclusive right to prevent third parties, who do not have his consent, from the act of making, using, offering for sale, selling or importing for those purposes that product in India (b) where the subject matter of the patent is a process, the exclusive right to prevent third parties, who do not have his consent, from the act of using that process, and from the act of using, offering for sale, selling or importing for those purposes the product obtained directly by that process in India "

Note – the court has restrained Natco from carrying out any fresh manufacturing of NOXALK (Ceritinib), but has allowed to sale already manufactured product during the pendency of the hearing, considering that the product is a drug for treating non-small cell lung cancer (NSCLC), since stopping the sale of already manufactured product would not benefit the patient community in any manner.

DBT and DAE signed MoU for Joint Collaboration on Cancer Research

On May 22, 2019 the Department of Biotechnology (DBT), Ministry of Science and Technology and the Department of Atomic Energy (DAE), Government of India have signed a Memorandum of Understanding (MOU) for supporting joint collaborative research programmes in the area of Cancer. The Tata Memorial Centre which is coordinating centre of The National Cancer Grid of India will represent DAE for this collaboration.[5].

The collaboration aims to work towards the common goal of tackling cancer and also to bring a quantum change in the present scenario of cancer research. The MoU will help strengthen the various initiatives specifically for fighting cancer like:

- Strategizing and prioritizing cancer research,
- Development of new and affordable technologies,
- Jointly design and fund clinical trials,
- Coordinate and collaborate for translational research, interventions, training of manpower and infrastructure development.

Further, the clinicians and researchers will work together to identify and develop collaborative research programmes and public health initiatives for awareness of the public at large. Various activities like joint clinical fellowships, intensive workshops on clinical research methodologies and protocol development shall work towards creating a community of trained manpower and provide a platform to utilize their acquired skills in the best possible manner.

About Cancer

Cancer is a general name for a group of diseases where normal cells due to some reason become abnormal and grow in an uncontrolled fashion. Untreated cancers cause serious illness, disability and death. There are more than 100 types of cancers; which can affect almost any part of the body. The five most frequent cancers (ranking defined by the total number of cases) in India in men and women are breast, cervical, oral cavity, lung and colorectal. Cancer is the second most common cause of death in India (after cardiovascular disease). Around 2.25 million people are estimated to be living with cancer, and every year, new cancer patients registered in India are over 11,57,294 lakhs[6].

5 http://pib.nic.in/PressReleseDetail.aspx?PRID=1572400

6 http://cancerindia.org.in/cancer-statistics/

Central Government classifies 12 new notified medical devices under MDR 2017

On May 15, 2019 Central Government classified twelve (12) new notified medical devices under risk based classification of Medical Device Rule, 2017[7]. To streamline their regulation and to ensure patient safety.

Central Government has already included 33 notified medical devices under this classification on the basis of their risk or intended purpose of use. The *First Schedule*[8] of the Medical Devices Rules, 2017 describes the parameters for classification of medical devices and in vitro diagnostic medical devices which further categorizes devices into A to D category of risk classes. According to this classification:

(1) Medical devices other than in vitro diagnostic medical devices classified on the basis of parameters specified in Part I of the First Schedule shall be classified on the basis of parameters:

- low risk - Class A;
- low moderate risk- Class B;
- moderate high risk- Class C;
- high risk- Class D.

(2) In vitro diagnostic medical devices shall be classified on the basis of parameters specified in Part II of the First Schedule, in the following classes :—

- low risk - Class A;
- low moderate risk- Class B;
- moderate high risk- Class C;
- high risk- Class D.

Now, therefore the 12 new notified medical devices have also been classified under MDR, 2017[9]:

S.no	Notified category	Intended uses	Risk Class
1	CT scan equipment	Use of x-ray source and digitally scanned computer technology to create cross-sectional Images of the body.	Class C
2	MRI equipment	It is a medical imaging procedure using radio waves, magnetic fields, and magnetic field gradients to generate images of organs in the body.	Class C
3	Defibrillators	It is a device that automatically analyzes the rhythm of the heart of cardiac arrest patients and delivers an electrical shock to the heart for restoring the normal rhythm of the heart.	Class C
4	Dialysis Machine	It is used for acute or chronic kidney failure that filters blood to remove excess water and waste products.	Class C

7 https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download_file_division.jsp?num_id=NDM5Ng==

8 https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/download_file_division.jsp?num_id=MzMzNg==

9 The content has been taken from the US. FDA official site

5	PET Equipment	Intended to detect the gamma radiation and positron emitting radionuclides in the body and produce cross-sectional images which reflect the distribution in the body or individual organs.	Class C
6	X-Ray Machine	Use of X-rays to diagnose or treat patients by imaging the internal structure of the body to assess the abnormalities in the body.	Class C
7	Bone marrow cell separator	It is a general lab equipment to be used to isolate target cells and cells concentrate from bone and blood.	Class C
8	Nebulizer	It is a device used to administer medications in the form of mist to inhale for respiratory disorders.	Class C
9	Blood Pressure Monitoring Devices	It is a device used to measure the diastolic and systolic blood pressures.	Class C
10	Digital Thermometer	It is a device used to record the body temperature.	Class C
11	Glucometer	It is a device used to measure the concentration of glucose in the blood.	Class C
12	Organ Preservative Solution	Solution for hypothermic flushing, storage and transport of organs and to maintain the organ vitality during transplant into human recipients	Class C

Conclusion

The safety and quality of the medical devices is mentioned under the provisions of the Drugs and Cosmetics (D&C) Act, 1940. However, the classification is meant for the regulation of these medical devices intended with respect to the import, manufacture, clinical investigation, sale and distribution under MDR, 2017.

WHO has come up with new official guidelines to help people reduce the risk of dementia

On May 14, 2019 WHO has come up with a new guideline on "*risk reduction of cognitive decline and dementia*[10]" which provide evidence-based recommendations on lifestyle behaviours and interventions to delay or prevent cognitive decline and dementia. The guideline will help people to reduce the risk of dementia by including healthy lifestyle changes such as regular exercise, not smoking, avoiding harmful use of alcohol, controlling their weight, eating a healthy diet, and maintaining healthy blood pressure, cholesterol and blood sugar levels. The guideline noted that in the next 30 years, the number of people with dementia is expected to triple hence there is a need for a strategic plan to control the progression of disease in the future generation.

Dementia is a serious concern for the society and the number of people with dementia is expected to increase to 82 million in 2030 and to 152 million by 2050 Hence there is an urgent need to develop the guidelines which can act as a guidance document for health care providers and policy makers to come out with certain lifestyle modifications to delay or prevent cognitive decline and dementia in the general population.

Key Points of the Guidelines

The guideline offers a base knowledge to a health care provider and how they can advise patients on what can be done to help prevent cognitive decline and dementia. The guideline will also be useful for governments, policy-makers and planning authorities to guide them in developing policy and designing programmes that encourage healthy lifestyles.[11]

The reduction in risk factors for dementia is one of several areas of action included in WHO's Global action plan for the public health response to dementia. Other areas include: strengthening information systems for dementia; diagnosis, treatment and care; caretakers of people with dementia; and research and innovation.[12]

The major focus of WHO is on creating the policies and plans for managing the growth of the disease. During 2018, WHO provided support to countries such as Bosnia and Herzegovina, Croatia, Qatar, Slovenia and Sri Lanka to help them develop a comprehensive, multi-sectoral public health response to dementia.

About Dementia

Dementia is an illness characterized by a deterioration in cognitive function beyond what might be expected from normal ageing. It affects memory, thinking, orientation and comprehension, calculation, learning capacity, language and judgement. Dementia results from a variety of diseases and injuries that affect the brain, such as Alzheimers disease or stroke

Conclusion

These guidelines will act as a guiding document to health care providers and policy makers of different countries under the risk of dementia in developing different policy and designing programmes that encourage healthy lifestyles. Moreover, these guidelines will help the countries to keep a check on the growth and the risk factors of the disease.

10 https://apps.who.int/iris/bitstream/handle/10665/312180/9789241550543-eng.pdf

11 https://www.who.int/news-room/detail/14-05-2019-adopting-a-healthy-lifestyle-helps-reduce-the-risk-of-dementia

12 The content has been taken from WHO official website

FDA permits the first diagnostic test to aid in detecting prosthetic joint infections

On May 23, 2019 United StatesFood and Drug Administration permitted the marketing of *Synovasure Lateral Flow Test Kit* as an aid for the detection of periprosthetic joint infection (infection around a joint replacement) in the synovial (lubricant) fluid of patients being evaluated for revision surgery, performed to replace or compensate for a failed implant[13].

The approval followed by a clinical study that analyzed 305 prospective synovial fluid samples collected from individuals with a total knee or hip joint replacement who were being evaluated for revision surgery. The study showed that 89.5% of subjects with an infection diagnosis based on the standard of care criteria were also identified as positive for alpha defensins by the Synovasure Lateral Flow Test Kit.[14]

Earlier there was a Diagnostic test which was used to detect the inflammation in the joint and to know the exact cause of inflammation. The test is FDA-authorized test and was used by a health care professional as an additional option for clinical assessment of the disease. Further this test helped health care professionals to take decision for the surgery.

The FDA granted marketing authorization of the Synovasure Lateral Flow Test Kit to CD Diagnostics Inc.

About Synovasure Lateral Flow Test Kit

The Synovasure Lateral Flow Test Kit detects proteins called human alpha defensins in the synovial fluid of patients with a total joint replacement in approximately 10 minutes. Alpha defensins are antimicrobial proteins released by activated neutrophils (white blood cells) in response to infection. The test kit is intended as an aid for determining whether there is an infection present in synovial fluid. It is not intended to identify a specific type of infection. The test results are also intended to be used in conjunction with other clinical and diagnostic findings to aid in a patient's diagnosis of prosthetic joint infection.

Note

The Synovasure Lateral Flow Test Kit was developed to check the exact cause of infection in synovial fluid after surgery. This acts as a useful aid for the health care professionals to take the right decision of repeating the surgery in case of infection at the site of surgery.

13 https://www.fda.gov/news-events/press-announcements/fda-permits-marketing-first-diagnostic-test-aid-detecting-prosthetic-joint-infections

14 The content has been taken from the US.FDA official site

US FDA warns health care professionals against the use of unauthorized devices for diabetes management

US FDA has warned health care providers and people with diabetes on unauthorized sale of the dibetes management devices in the U.S. following the data received by US FDA on serious adverse events in people with diabetes using unauthorized devices for diabetes management used alone or along with authorized devices[15].

As the number of diabetic patient's increases, there is an increase in cases of usage of glucose monitoring device for measuring the sugar level. Most of the devices have not been reviewed by the FDA and do not have any assurance from the FDA on its safety and effectiveness for their intended use. Using such unauthorized devices can result in inaccurate glucose level readings or unsafe insulin dosing, which can lead to injuries requiring medical intervention, such as severe low blood sugar, coma, diabetic ketoacidosis (buildup of acids in the blood), and death.

In addition, the FDA is aware of manufacturers marketing unauthorized diabetes management devices that use an algorithm to convert raw data from an FDA authorized glucose sensor to a glucose level displayed to the patient. The FDA has not evaluated the algorithm that these unauthorized devices use. The algorithm may return inaccurate glucose values.

Moreover, FDA has authorized diabetes devices that have been designed to work safely with other devices, such as integrated continuous glucose monitoring systems and "*automated controller enabled"* insulin pumps that comprise diabetes therapy systems.[16] Usage of these authorized devices help patients to accurately measure their sugar level and moreover, these devices are also labelled to indicate which compatible devices patients can safely use together as a system.

Note: Prompt reporting of the adverse events to FDA can help in better understanding of the risk associated with the use of continuous glucose monitoring systems, automated insulin dosing systems, and insulin pumps. Patients should make it practice to report any adverse event experienced with the use of continuous glucose monitoring systems, automated insulin dosing systems, and insulin pumps.

Conclusion:

Avoiding the use of unauthorized devices for monitoring the glucose level will prevent the patient from insulin overdose and various injuries requiring medical intervention or death. This will also help the USFDA to take prompt action against these unauthorized devices which are being manufactured in the market.

15 https://www.fda.gov/medical-devices/safety-communications/fda-warns-people-diabetes-and-health-care-providers-against-use-devices-diabetes-management-not

16 The content has been taken form U.S FDA official site

FDA approves first anticoagulant 'Fragmin' to treat potentially life-threatening blood clots in pediatric patients

On May 16, 2019 the U.S. Food and Drug Administration approved Fragmin (dalteparin sodium) injection, for subcutaneous use, to reduce the recurrence of symptomatic venous thromboembolism (VTE) in pediatric patients one month of age and older[17]. Fragmin was initially approved by the FDA in 1994 for adults and is a type of heparin, which works as an anticoagulant.

The efficacy of Fragmin in children was analysed by a single trial with 38 pediatric patients with symptomatic deep vein thrombosis and/or pulmonary embolism. Patients were treated with Fragmin for up to three months, with starting doses by age and weight. On completion of the study, 21 patients achieved resolution of the qualifying VTE, seven patients showed regression, two patients showed no change, no patients experienced progression of the VTE and one patient experienced recurrence of VTE.

The FDA granted this application Priority Review designation. Pfizer holds the application for Fragmin.

About venous thromboembolism

VTE usually develops as a secondary complication of underlying clinical conditions such as a venous catheter, cancer, infection, congenital heart disease, and trauma or surgery. Pediatric VTE is associated with an increased risk of in-hospital mortality, recurrent VTE and post-thrombotic syndrome (damage to vein). VTE can include deep vein thrombosis (blood clot in the deep veins of the leg) and pulmonary embolism (blood clot in the lungs), which can lead to death.

About Fragmin

FRAGMIN is a low molecular weight heparin (LMWH) indicated for prophylaxis of ischemic complications of unstable angina and non-Q-wave myocardial infarction. Prophylaxis of deep vein thrombosis (DVT) in abdominal surgery, hip replacement surgery or medical patients with severely restricted mobility during acute illness. Extended treatment of symptomatic venous thromboembolism (VTE) to reduce the recurrence in adult patients with cancer. In these patients, the FRAGMIN therapy begins with the initial VTE treatment and continues for six months. Treatment of symptomatic venous thromboembolism (VTE) to reduce the recurrence in pediatric patients 1 month of age and older[18].

17 https://www.fda.gov/news-events/press-announcements/fda-approves-first-anticoagulant-blood-thinner-pediatric-patients-treat-potentially-life-threatening

18 https://www.accessdata.fda.gov/drugsatfda_docs/label/2019/020287s072lbl.pdf

FDA approves first PI3K inhibitor for breast cancer

On May 24, 2019 United States Food and Drug Administration approved Piqray (alpelisib) tablets, to be used in combination with the FDA-approved endocrine therapy fulvestrant, to treat postmenopausal women, and men, with hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative, PIK3CA-mutated, advanced or metastatic breast cancer[19].

The efficacy of Piqray was studied in the SOLAR-1 trial, a randomized trial of 572 postmenopausal women and men with HR-positive, HER2-negative, advanced or metastatic breast cancer whose cancer had progressed while on or after receiving an aromatase inhibitor. The results of the SOLAR-1 trial showed that the addition of Piqray to fulvestrant significantly prolonged progression- free survival (median of 11 months vs. 5.7 months) in patients whose tumors had a PIK3CA mutation.[20]

The FDA granted this application Priority Review designation. The FDA granted approval of Piqray to Novartis.

About Metastatic Breast cancer

Metastatic breast cancer is the type of cancer in which the cancer has spread to other organs in the body (most often the bones, lungs, liver or brain). In case when the breast cancer is hormone receptor positive then patients may be treated with anti-hormonal treatment (also called endocrine therapy), alone or in combination with other medicines, or chemotherapy.

About PIK3CA

PIK3CA is the most commonly mutated gene in HR+/HER2- breast cancer; approximately 40% of patients living with HR+/HER2- breast cancer have this mutation. PIK3CA mutations are associated with tumor growth, resistance to endocrine treatment and a poor overall prognosis. Piqray targets the effect of PIK3CA mutations and may help overcome endocrine resistance in HR+ advanced breast cancer[21].

About Piqray

Piqray is the first PI3K inhibitor which is used in the treatment of the metastatic breast cancer and is very beneficial in treating cancer in combination with endocrine therapy. The advantage of this drug is that it can be also be used in Combination with the FDA-approved endocrine therapy fulvestrant, to treat postmenopausal women, and men, with hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative, PIK3CA-mutated.

Note - The FDA granted this application Priority Review designation. The FDA granted approval of Piqray to Novartis.

19 https://www.fda.gov/news-events/press-announcements/fda-approves-first-pi3k-inhibitor-breast-cancer

20 The content has been taken from US. FDA official site

21 https://www.novartis.com/news/media-releases/fda-approves-novartis-piqray-first-and-only-treatment-specifically-patients-pik3ca-mutation-hrher2-advanced-breast-cancer

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