• **Special Topic**

The humidifier disinfectant case and the legislative challenges of the 20th Congress

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A number of absurdities surrounding the humidifier disinfectant (HD) incident may have occurred because 1) a judicial system operates on the underlying false assumption that the involved parties are equals in knowledge, information and resource mobilization capabilities, regardless of respective real status as company or individual; 2) there is a lack of a system that mandates a company to prevent and actively manage possible catastrophes; 3) the regulatory scheme makes companies believe that as long as they are complying with the existing regulations, they have satisfied all of their responsibilities. I believe that this issue is an opportunity to bring about changes in the judicial redress system, the system of internal management of manufacturers, and the regulatory system of the government. The following regulation amendments are needed to move towards the changes stated above. First, legislation relating to victim relief that is applicable to the HD incident must be established. Second, a risk management system must be formed within the manufacturing company and to this end an institutional environment for the system must be established within regulatory framework. Furthermore, legislation must be passed that could punish companies themselves that have caused severe damage to individuals because they had failed to take necessary actions to avoid foreseeable harm. Finally, the framework of regulation must be changed so that the company, who has the necessary information regarding the product and the component chemicals used in the product, must self-directed experiment and assessment of the safety of their own products.

Keywords Enterprise risk management system, Humidifier disinfectant, Hazard review, Judicial relief system

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Introduction

According to the government report, toxic humidifier disinfectant (HD) used in South Korea (hereafter Korea) has affected a total of 530 victims since 2015, out of which 146 were fatalities. However, the number of victims reported to the Civilian Complaint Center established by the HD victim committee and other civilian organizations has reached a total of 1838, of which there have been 266 deaths as of May 2016. There is nothing other than the HD to have caused such a large number of deaths or illnesses in terms of household product incident in the Korean society. It wasn't until April of 2016, nearly four years after the victims filed a accusation against the HD manufacturers for manslaughter (August 2012), that the Prosecutor's Office finally

established an investigative task force to see whether or not the producer of the disinfectant was aware of the hazards during the development and manufacturing processes. The investigation revealed that the manufacturer did not conduct an inhalation toxicity test for the disinfectant despite being aware of the need to do so. In addition, the manufacturer commissioned a university research institute to test the disinfectant for its potential to cause interstitial lung diseases, and then proceeded to actively distort the research result by only including results that favored the company. In light of the results, the Prosecutor's Office charged the people in control at the time of the product release, chief executive officer (CEO) of Oxy Reckitt-Benckiser and the head researcher, with corporate involuntary manslaughter.

How is such an incident possible? How was such a hazardous

chemical able to pass the government's hazard assessment? How could an industrial abstergent be used as an ingredient for a HD without going through a single inhalation toxicity test? How could Oxy make the reckless decision to not carry out inhalation toxicity tests while knowing the potential dangers of the substance? How is it possible for a vile product that was manufactured by mixing hazardous materials to be released into the market? On the other hand, why did the victims who sued the manufacturer for damages settle for such a small amount without receiving even an apology from the company?

It seems the cause of these ridiculous problems surrounding the HD lie in the systems: specifically the dysfunction of the judicial redress, company management, and the regulatory systems. Hence, this paper recommends some changes to the current systems to prevent another HD incident.

Issues Raised and Analysis

An Absurd Drama

#1. Many of the victims and their bereaved families have "settled" with the manufacturers responsible for the incident in the civil litigation seeking compensation for damages and losses. The value of the settlement for the severely injured and families of the deceased was between 200 to 300 million Korean won, based on the value of the recompense from a traffic accident. A confidentiality duty regarding the contents of the settlement was burdened upon plaintiffs as the settlement terms.

#2. The ex-CEO of Oxy Reckitt-Benckiser was praised as a father who dutifully raised his disabled son, yet he sold toxic products to the public without premarketing test process for the affirmation of the safety of the products before marketing. Netizens have criticized the CEO's contradictory character.

#3. The CEO of Cefu manufactured the company's HD by mixing raw materials from a recipe found online, rather than doing so in a professional and scientific way. Unfortunately even his own daughter died as a result of his negligence.

The families of the bereaved and the surviving victims, who may have to live with respiratory aids for a large portion of their lives, have reluctantly agreed with the draft of compensation terms based on the value from a traffic accident settlement even without a single apology from the culpable companies. It has been known that the ex-CEO of Oxy, who devotedly raised his handicapped child, was fully cognizant of the need for a polyhexamethylene guanidine (PHMG) inhalation toxicology test at that time, but proceeded to develop and sell the product without premarketing testing. The CEO of Cefu HD was thoroughly ignorant to the dangers of his own products, which even lead to the death of his own 11-month old daughter.

Analysis

Who or what caused and upheld these irrational situations? The preponderance in power and resource mobilization of companies over the individual appears to penetrate into even civilian litigation where the relevant parties are treated as equals. In the current judicial redress system absent of an evidence discovery system, the victims are shouldered with burden of proof that the damage was caused by the product (causality) despite the fact that manufacturers hold all the necessary information. To prove the causality, using an expert witness may be helpful, but finding an appropriate expert is difficult and its use is usually such expensive as not affordable to plaintiff. As a result, an expert witness system is just a system that only exists in the code of law, that is, a pie in the sky, to those lacking the financial capacity. On the other hand, the companies in question deny the victim's argument of causality and go on to recruit professionals in the field and produce a report that is beneficial to themselves and then submits it to court as refuting evidence. As the "psychological stress" induced from manufacturer's denial of wrongdoing and reluctance of taking their responsibility is getting heightened by the abdicating pleadings of the law firm legally representing for the company, and the "anxiety and despair" from the possibility of losing a case due to the number of reports supporting the company submitted by prominent university research institutes are overwhelming, the victims drop the suit and agreed on a settlement that is small in value markedly disproportionate compared to the suffering they have gone through and endured. Even if they won a compensatory suit trial, the company, without a single word of apology, quickly pays a miniscule amount ordered by court and is freed from at least legal responsibility. Whenever there is a catastrophe in Korean society, debates arise around the need for special laws, which is suggestive of a dysfunctional judicial redress system.

Meanwhile, the ex-CEO of Oxy having had seemingly no regard for the lives of others, has received social criticism for his inconsistent character. Why did he adopt a different posture on lives? That is why the relationship with his son as a father and the relationship with his company as a CEO required different behaviors. As a father of a disabled son, his priority was to equip his child with the skills to live confidently as a member of society, and the costs to do so were secondary to the successful fostering of his child. On the contrary, as the CEO, his first concern was to maximize profits to ensure the continuing growth of the company and the shareholder's satisfaction. Hence, his main concern is to reduce 'costs' as low as possible. Considering from this perspective, in order to expect ethically responsible management from companies, it may be more effective to formulate an internal managing environment that requires businesses to

Table 1. Comparison of the proposed special laws regarding the relief of humidifier disinfectant victims in the 19th Congress

Title of Act (proposer)	Reason for proposal	Purpose and aim	Related committee	Damage relief fund
Humidifier Disinfectant Relief Act (Congressman Young Pyo Hong, Jun 14, 2013)	A catastrophe caused by the failure to manage chemicals by the city and nation of manufacturing Prolonged suffering of the victims due to the length of the litigation	Provide relief funds to the victims who have deteriorated in health due to the humidifier disinfectant to help reduce their financial burdens	Humidifier Disinfectant Damage Survey Certification Panel - Investigate the damage of the humidifier disinfectant and approve the victims to receive funds	Humidifier Disinfectant Damage Relief Fund - Government contribution - Humidifier disinfectant damage relief contributions
Act Regarding Damage Relief from Toxic Inhalants from Humidifier Disinfectant (Congresswoman Ha Na Jang, Apr 18, 2013)	Increase in preventable damage from not following the initial hazard investigation conducted by the Environment Ministry	Quick and effective assistance to humidifier disinfectant victims by distributing relief funds	Humidifier Disinfectant Damage Committee - Relief for humidifier disinfectant victims, establishing government policy, survey of humidifier disinfectant damage	Humidifier Disinfectant Damage Relief Fund - Government contributions - Donations from humidifier disinfectant manufacturer
Act Regarding the Safety Management of Household Products and Damage Relief (Congresswoman Eun Ju Lee, May 7, 2013)	Legal basis for safety management of household goods and provide relief for unexpected damage from the use of household goods	Contribute to consumer safety by regulating the safety management of household goods Quick and fair relief for health damage from chemical side effects of household products	Household Product Damage Evaluation Committee Evaluation Committee for Relief of Household Products Damage	Relief Fund for Damage Caused by Household Products - Contributions from the government and other funds - Household goods damage relief fund
Act Regarding Relief of Damage Caused by Chemical Substances and Products with Chemical Substances (Congresswoman Sang-Jung Shim, Jun 10, 2013)	Lack of a legal regulation regarding the relief of damage caused by chemical substances and products with chemical substances	Quick and fair relief for health damage caused by chemical and physiological reactions from chemical substances and products	Evaluation Committee for Damage from Chemical Substances and Products Damage Relief Approval Committee for Damage from Chemical Substances and Products	Relief Fund for Chemical Substances and Products - Chemical substances and products damage relief fund - Contributions from the government and other funds

pay the necessary costs rather than to ask the principal manager to run the company with a parental mindset [1].

The reason why the CEO of Cefu could remain so ignorant of the dangers of the product that he made himself was that the materials used (oligo(2-)ethoxyethoxyethyl guanidine chloride, PHMG) have been promulgated as “non-toxic” by the government hazard evaluation. Furthermore, the chemical management system allowed such chemicals to be used freely without regard to their purported usage (in other words, even though a chemical’s usage assumed at that time of evaluation was planned to be changed differently, the chemical was allowed to be used without reassessment) [2], alongside the Quality Control and Safety Management of Industrial Product Act that states that the manufacturer does not have a legal obligation to confirm the safety of its products and also cannot be forced to do so by the government unless the product is one of the safety management target products [3].

Given the conditions stated above, the absurdities surrounding the HD occurred because of 1) the reality that an individual victim must sue a large corporation under a system that is designed to operate under the assumption that the two parties are equals; 2) the lack of a system that mandates a company to prevent and actively manage hazards; 3) the regulatory framework that maintains the belief that all duties are satisfied when regula-

tions are followed. I believe that this issue is an opportunity to bring about changes in the judicial redress system, the system of internal management of a corporation, and the regulatory system of the government. The fundamental purpose of concerned changes is to establish internal risk management system of corporations, therefore, changes in the judicial and regulatory system must serve as a pressured external environment that induces a change in the internal systems of corporations.

Discussion

Changes in the Judicial Redress System

Even though a proper solution to the HD issue is desperately needed, the design tenet of the judicial system that assumes the equality of all parties involved cannot be changed fundamentally. It seems the direction of change must be towards a systematic way of supporting victims who have remarkably limited capacities in terms of ‘related information,’ ‘professional knowledge,’ and ‘acquiring expert witness.’ The internal information of a corporation must be made accessible through an evidence discovery system [4]. The corporation should be required to disprove causation once the victim has demonstrated a considerable degree of causation. However, the most vulnerable aspect of being a victim is the lack of ability to seek help from a relevant

professional. Also, like those victims affected by the HD case, many individuals must have a fight against the mighty corporation during times of economical and psychological distress, which can add to their burden. These array of situations raise the need for a public relief system.

Four different special laws regarding the relief of HD victims were suggested in the 19th Congress. The reasons and goals of each of the proposals are as follows (Table 1).

The Federation of Korean Industries posed an opposition stating that this special law is “a violation of polluters pay principle (PPP), and, if necessary, relief funds must be prepared from government contributions” [5]. The government also disagreed with the enactment of the proposed act, arguing that “it is not desirable to spend general taxpayers’ money in a private dispute between an individual and corporation that should be resolved through civil litigation, and that it may be contrary to PPP to lay monetary burden on corporations not be culpable for the damages” [6]. In my opinion, it seems that requiring innocent corporations to make a financial contribution to relief fund in a situation where the guilty corporation is clearly identifiable might be a violation of PPP [7]. However, I cannot agree with the government’s logic behind its opposition because that the state should bear the responsibility of protecting its citizens from infliction by the third party where there is a risk of severe damage to lives or health of the citizen [2].

Hence the taxpayers’ money (government contribution) should be used to provide immediate economic relief in emergencies and then demand for reimbursement against the guilty corporation. The relief regulation can also have the following effect. A causal relationship will be proven through the damage identification process for relief, and the responsibility of the company can be confirmed through indemnification litigation. The guilty corporation can seek to resolve problems during the relief process that the government initiated. The existing Asbestos Injury Relief Act only applies to damage from asbestos, while the Liability for Environmental Damage and Relief Act only applies to damage from environmental facilities provided in the act. A relief law that can be applied to the HD case must be enacted as soon as possible. However, there is a need for a further discussion regarding the type of the relief law, that is the law should be in the form of a special law that is only applicable to the HD case or in a more general form that is applicable to similar situations.

Changes to the Internal Management Systems of Corporations

The Corporate Manslaughter and Corporate Homicide Act was enacted in 2007 in the UK under the assumption that companies are certainly incentivized to devise and develop safety

management systems if they get aware of the risk of being criminally punished due to their act or omission [8]; the development of these risk management systems within corporations in Korea is also essential. In the company’s perspective, however, such systems are seen as ‘cost’ and therefore it cannot be expected of the corporation to voluntarily operate such a system. This necessitates the creation of an institutional environment that forces or induce firms to accommodate such necessary costs. This paper examines as an institutional environment 1) a punitive damage compensation system and alternatives and 2) a Corporate Manslaughter Act.

Punitive Damage Compensation Systems and Alternatives

The argument in favor of the introduction of a punitive damage compensation system (punitive damage) has been presented by consumer groups over the past decades, but was never passed due to failure for agreement [9]. The recent HD incident has once again sparked the debate surrounding the incorporation thereof. A group called Association of Lawyers/Professors Supporting Punitive Damage Compensation has made statements arguing that “it is necessary to adopt a system that enforces punitive damage compensation from manufacturers of goods that directly cause harm to the health of the citizens such as foods, medication, and detergent.” However, the majority of scholar still remains against such a punitive damage [10]. While I think that punitive damage is worth consideration, in order to avoid fruitless conflict, I propose the several systems almost equivalent to punitive damage in teams of corporation’ risk management-inducing effect as follows: 1) a way to effectively utilize solatium [11], 2) a way of issuing penalty surcharge (assuming transfer of damage relief funds), and 3) a method of confiscating earnings from guilty corporations (under the requirement that a company is being punished). Although the feasibility of the alternatives above must be reviewed in depth, in order for these alternatives to prompt corporations to formulate internal risk management systems, at least the majority of revenue from selling the product in dispute is to be restituted.

Introduction of Criminal Punitive Legal System Against Corporations

The corporation themselves must also be subject to criminal punishment. The prosecution has convicted the former CEO and the senior researcher of Oxy with involuntary manslaughter, instead of intentional or willful manslaughter, presumably owing to the insurmountable, if not impossible, burden of proving intentionality. To be able to sentence a CEO of a company for at least willful manslaughter, the prosecutor needs to prove that the CEO has disregarded the highly probability of death, yet,

proving the fact is not easy. However, if the criminal investigation focused on Oxy itself, it is possible to get a different result. The gist of the social criticism on Oxy lies within the intentional recklessness in decision-making of skipping the necessary pre-marketing inhalation toxicity test while using industrial-grade cleaner with a view to lowering production expense. Intentional recklessness can be found when company have predicted a probable dangerous consequence but not stopped so as to identify and assess the hazard and not taken necessary measures to avoid it. If an individual behaves in this manner, this qualifies as willful negligence. Different from the judicial system of the UK, Korea's criminal justice system denies the criminal capacity of corporations in general [8]. However, the fact does not mean that lawmaking for criminal punishment of corporation is inadmissible to adopt. Rather, such a law can deter a reckless behavior of corporation effectively. Corporations tend to resolve a problem just by the replacement of the owner or CEO. However, if corporations become punishable, they will seek to formulate an internal risk management system.

Changes in the Government's Regulation System

Rationalization of Individual Regulations

Currently the Act on Registration and Evaluation of Chemicals of Korea requires the reporting of chemicals used in excess of one ton annually and/or in a concentration above 0.1% for household chemical products [8]. However, it is presumed that most of the chemicals used in household chemical products are not required to be reported. In such cases, the only option is to use the product safety standards to ensure the safety of the product, but there is no way for the government to know the amount or the toxicity of the chemicals used in the product. The safety management system based on product safety standards may be difficult to operate due to the lack of information available to the government [12]. The blind spot caused by the division of responsibility between the Ministry of Environment and the Ministry of Trade, Industry, and Energy regarding the monitoring of chemicals and chemical products must also be resolved. In particular, it is concerning to see the safety of chemicals in children's products monitored by Korean Agency for Technology and Standards, which is supervised by the Ministry of Trade, Industry, and Energy. Although the problem of managing potentially harmful chemicals is being partially resolved through the registration and evaluation of the chemical substances law, the system also operates by setting safety standards based on product categories and thereby faces the same problems. Hence, products with great safety concerns such as aerosol type products should be managed through a system of prior registration and approval [12]. Biocides such as HDs should be

managed separately, similar to the protocol of other developed nations [13].

Changes in the Framework of Regulations

Organizing individual regulations more efficiently, needless to say, is necessary. However, we should also be clearly aware of the limitations of efficient organizations of individual regulations alone [14]. Even if there wasn't a hazard reevaluation regulation based on the changes in the use of the substance, Oxy should have conducted inhalation toxicity tests. However, Oxy not conducting these tests is not a violation of the chemical substance management law. Forcing mandatory regulations will give way to the negative belief that anything that is not regulated is permitted. In reality, no matter how well the regulation is implemented, there cannot be without flaws. Considering the limitations in enforcement and the time lag effect of regulation, it is evident that rationalization and strengthening of individual regulations will not ensure safety sufficiently.

Hence, the framework of regulation must be one that makes the corporations, who have the information regarding the product and the materials used in the product, test their products themselves, followed by a government evaluation regarding the adequacy and validity of the test and subsequent tests if needed [14]. In this structure, the manufacturer will begin to realize that their legal responsibility does not simply lie in whether or not they followed the regulations but rather whether all efforts were made to avoid and reduce harm [12]. Due to these points, implementation of regulations and the formation of risk management systems of corporations must go hand in hand.

Conclusion

This paper examined the absurdities surrounding the HD case and their origins. The following changes in regulation are necessary in order to prevent a repeat of this tragedy. Firstly, relief legislation applicable to the HD incident is needed. It is, arguably, advised that the regulation be a common law that is applicable to similar situations rather than a special law that is only applicable to the HD case. Secondly, a risk management system must be established within corporations and a regulation environment must be formed to suit such development. As relevant regulations, in addition to a punitive damage compensation system, we may be able to consider the following options: 1) a method of utilizing solatium effectively [12], 2) a way of issuing penalty surcharge (assuming transfer of damage relief funds), and 3) a method of confiscating earnings from guilty corporations (assuming punishment of corporation). Also, a law should be enacted that allows prosecution of corporations that were aware of

potential dangers but made a decision to proceed without taking the necessary steps to avoid the danger, resulting in severe damage to lives. Finally, the framework of regulation must be changed so that the corporations themselves, who have the necessary information regarding the product and the chemical substances used in the product, test the safety of the products followed by a government inspection and modifications to ensure the adequacy and validity of the tests. Using this structure, the manufacturer will begin to realize that their legal responsibility does not simply lie in whether or not they followed the regulations but rather whether all efforts were made in preventing harm.

Conflict of Interest

The author has no conflicts of interest associated with material presented in this paper.

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